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Walker

LIST
OF THE
SPECIMENS
OF
LEPIDOPTEROUS INSECTS
IN
THE COLLECTION
OF THE
BRITISH MUSEUM.

BY
FRANCIS WALKER, F.L.S.

PART III.—LEPIDOPTERA HETEROCERA.

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INTRODUCTION.

THE principal object of the present Catalogue has been to give a complete list of the specimens of Lepidopterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variations of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters *a, b, c, &c.*, following the name of the species and its synonyms, and the description, if it appeared to have been before undescribed.

The continuation is in hand, and will follow as soon as it is completed.

JOHN EDWARD GRAY.

British Museum,

May 14th, 1855.

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CATALOGUE
OF
LEPIDOPTERA HETEROCERA.

PART III.

Tribe 6. BOMBYCITES.

Bombycina, *Stainton, Ins. Brit. Tineina*, 4.

The eleven following families, with the exception of the *Drepaulidæ*, form the *Lepidoptera Pomeridiana* of Stephens, which are thus characterized:—

“Palpi s. pissime duo, breves, plerumque cylindrici. Maxillæ (aut proboscis) nullæ aut brevissimæ, submembranaceæ, non convolutæ.* Antennæ, *maris* saltem, plus minusve ciliatæ vel pectinatæ, nonnunquam serratæ. Caput parvum. Thorax raro cristatus. Corpus sæpissime robustum, apice sæpe lanuginosum. Alæ elongatæ, trigonæ, plerumque deflexæ, indivisæ. Larva pedibus sexdecem, analibus nonnunquam spuriiis.”

Lepidoptera Pomeridiana, *Steph. Ill. Brit. Ent. Haust.* ii. 2.

With the *Lithosiidæ* and the tribe of *Noctuities* they form the *Noctuo-Bombycides* of Herrich-Schæffer. The *Lithosiidæ* are mentioned as a distinct family in the preceding part of this Catalogue, but are very closely allied to the *Arctiidæ*, and may be united with them and with the tribe of *Zygænides* in one extensive group, which will admit of several divisions. The great tribe of *Noctuities* may very generally be distinguished at first sight from the *Bombycites*, but are very little different from some of them in structure. Herrich-Schæffer distinguishes them from the *Liparidæ* by the ocelli, which are wanting in the latter family, and from the *Arctiidæ* by the costal vein of the hind wings appearing at the base of the wing.

* This character will not apply to several of the exotic genera.

Synopsis of Families.

A. Fœmina rarissime aptera. Larva libera.

A. Habitus sæpissime non geometriformis.

A. *Antennæ capitis latitudine multo longiores. Alæ anticæ aliter venosæ et infrenatæ, necnon majores ac posteriores.*

a. *Alæ anticæ vena marginis interioris unica.*

i. Frenulum conspicuum. Proboscis sæpissime plus minusve conspicua.

* Proboscis brevis, aut sat longa. Vena costalis alarum posticarum e arèola media. 2. ARCTIIDÆ.

** Proboscis brevis aut brevissima. Vena costalis alarum posticarum e basi. - 3. LIPARIDÆ.

*** Proboscis sæpissime brevissima aut nulla.

† Alæ longiusculæ, non rotundatæ; vena 1a alarum posticarum in angulum ani excurrent.

5. NOTODONTIDÆ.

†† Alæ breviusculæ, rotundatæ; vena 1a alarum posticarum marginis interioris medium vix superat. - - - 6. LIMACODIDÆ.

ii. Frenulum nullum. Proboscis nulla.

* Venæ 4a et 5a alarum posticarum origine valde remotæ. - - - 8. SATURNIIDÆ.

** Venæ 4a et 5a alarum posticarum approximatae.

† Vena 1a alarum anticarum basim versus furcata.

9. ENDROMIDÆ.

†† Vena 1a alarum anticarum basim versus simplex.

10. BOMBYCIDÆ.

b. *Alæ anticæ venis marginis interioris duabus.*

11. COSSIDÆ.

B. *Antennæ vix capitis latitudine longiores. Alarum omnium venæ forma, et fere magnitudine æquales.*

12. HEPIALIDÆ.

B. Habitus geometriformis. - - 7. DREPANULIDÆ.

B. Fœmina sæpissime aptera. Larva involucris sæpissime vitam degens. - - - 4. PSYCHIDÆ.

In the preceding characters the tribe of *Noctuities* are included with the *Liparidæ*, from which Herrich-Schæffer distinguishes them by their possessing ocelli. The same author mentions the want of ocelli in the *Lithosiidæ*, as the difference between them and the *Arctiidæ*.

Fam. 2. ARCTIIDÆ.

Statura robusta. Ocelli conspicui. Maxillæ breves, submembranaceæ, nonnunquam obsoletæ. Antennæ mediocres, *fæminæ* obsoletius, bipectinatæ, vel ciliatæ, nonnunquam serratæ, aut simplices. Palpi duo, parvi, pilosi, plerumque triarticulati, raro nulli. Abdomen crassum, maculatum. Alæ integræ, deflexæ, concinne depictæ. Frenulum conspicuum. Vena 1a alarum posticarum in angulum ani excurrent; 5a 4a multo propior quam 6a; 6a et 7a angulo antico areolæ mediæ, approximatae, e puncto aut ramo communi; 8a e areola media. Volatus sæpius gravis, nocturnus. Larva sæpius solitaria, pilis fasciculatis dense vestita, polyphaga, lubricipes, sæpius plantas humiles pascens. Pupa folliculata.

Chelonides, p., *Boisd.*; *Herr.-Schæff.*

Chelonarii, p., *Boisd.* olim.

Fam. Arctiidæ. Sub-fam. Chelonidi, *Steph. Cat. Brit. Lep.*

Arctiidæ, p., *Leach*; *Steph. Ill. Brit. Ent. Haust.* ii. 54.

Eyprepia, p., *Ochs. Schmett. von Eur.* iii. 299.

Phalænina Arctiites, *Newman, Ent. Mag.* ii. 382.

Arctia, *Schr.*

Arctia et Callimorpha, *Latr.*

Synopsis of Genera.

A. *Tibiæ posticæ bicalcaratæ. Fæm.* Alæ abortivæ. 1. TRICHOSOMA.

B. *Tibiæ posticæ sæpissime quadricalcaratæ. Fæm.* Alæ completæ.

A. *Tibiæ anticæ calcare forti inflexo.*

A. Antennæ simplices, *maris* vix serratæ. - 2. EUPREPIA.

B. Antennæ *maris* extus pectinatæ, intus serratæ; *fæminæ* serratæ.

a. Alæ unicolores. - - - - - 3. ESTIGMENE.

b. Alæ variegatæ. - - - - - 11. PHAOS.

c. Antennæ *maris* bipectinatæ. - - - 49. THEAGES.

B. *Tibiæ anticæ inermes.*

A. *Caput et thorax pilis longis vestita.*

a. Antennæ *maris* et *fæminæ* pectinatæ.

i. Proboscis sat longa.

* Palporum articulus 3us sat longus.

† Antennæ corporis dimidio non longiores.

‡ Palpi porrecti. - - - 40. AMELES.

‡‡ Palpi ascendentes. - - - 41. BARITIUS.

†† Antennæ corporis dimidio multo longiores.

51. AMASTUS.

** Palporum articulus 3us brevissimus.

† Alæ anticæ venis inferioribus 3a et 4a non remotis.
14. MAZÆRAS.

†† Alæ anticæ venis inferioribus 3a et 4a remotis.

‡ Tibiæ posticæ calcaribus longis.

§ Palpi longiusculi. - - 42. ELYSIUS.

§§ Palpi breviusculi. - 35. ANTHEUA.

‡† Tibiæ posticæ calcaribus parvis.

§ Pedes breviusculi. - - 46. PURIUS.

§§ Pedes longiusculi. - - 45. BITURIX.

ii. Proboscis brevis.

* Alæ totæ opacæ.

† Tibiæ posticæ calcaribus quatuor longis.

7. ALOPE.

†† Tibiæ posticæ calcaribus quatuor parvis.

67. SARAPUS.

††† Tibiæ posticæ calcaribus apicalibus parvis.

61. SCIATHOS.

b. Antennæ maris pectinatæ, fœminæ serratæ aut simplices.

i. Thorax fasciculis lateralibus longissimis.

28. NUMENES.

ii. Thorax non fasciculatus.

* Palporum articulus 3us non lanceolatus.

† Palporum articulus 3us non globosus nec cylindricus.

‡ Proboscis brevis.

§ Alæ discolores.

× Alæ rotundatæ. - - 4. ARCTIA.

×× Alæ subangulatæ. - 9. AMMALO.

§§ Alæ concolores.

× Alæ opacæ, dense squamosæ.

0 Alæ posticæ non dilatatæ.

— Thorax vix dense hirtus.

. Tibiæ quadricalcaratæ.

→ Palpi breves.

++ Tibiæ posticæ calcaribus breviusculis.

29. SPILOSOMA.

++++ Tibiæ posticæ calcaribus longiusculis.

38. ARDICES.

→→ Palpi longiusculi. - - 33. LACYDES.

. . Tibiæ bicalcaratæ. - 31. ALPHÆA.

= Thorax densissime hirtus. - - 44. PARACLES.

00 Alæ posticæ antice dilatatæ.

— Alæ posticæ margine postico non undulato.

48. AMAXIA.

- = Alæ posticæ margine postico undulato.
16. GLANYCUS.
- ×× Alæ subdiaphanæ, maculis rari-
ribus adpersæ. - 30. CYENIA.
- ××× Alæ nudæ, maculis squamosis.
59. AMBRYLLIS.
- ‡‡ Proboscis longiuscula.
§ Palpi capite longiores.
× Abdomen alas superans. 53. OPHARUS.
×× Abdomen alas non superans. 50. AGRISIUS.
§§ Palpi capite non longiores.
× Alæ hirtæ, opacæ.
0 Alæ longiusculæ.
— Palporum articulus 3us longiuscu-
lus. - - - 54. CARALES.
= Palporum articulus 3us brevissi-
mus. - - - 55. HALESIDOTA.
. Alæ *maris* anticæ subtus fas-
ciculatæ. - 39. NERITOS.
.. Alæ anticæ subtus non fascicu-
latæ. - - 58. ONYTHES.
- 00 Alæ latiusculæ.
— Palpi ascendentes. 8. TINOLIUS.
= Palpi porrecti. - 62. OVIOS.
- 000 Alæ sat angustæ, non longæ.
43. MALABUS.
- ×× Alæ fere nudæ, semihyalinæ. 47. APHYLE.
- †† Palporum articulus 3us globosus.
‡ Corpus gracile. - - 10. NEMEOPHILA.
‡‡ Corpus crassum. - - - 68. PINARA.
- ††† Palporum articulus 3us cylindricus.
‡ Proboscis brevis. - - - 17. DIACRISIA.
‡‡ Proboscis sat longus.
§ Tibiæ posticæ calcaribus longis.
63. EGYBOLIA.
- §§ Tibiæ posticæ calcaribus apicalibus parvis.
65. ARE.
- ** Palporum articulus 3us lanceolatus. 64. APINA.
- c. Antennæ simplices, ciliatæ.
i. Alæ mediocres.
* Abdomen alas posticas non superans.
† Alæ anticæ costa recta. - 12. PHRAGMATOBIA.
†† Alæ anticæ costa convexa. - 66. AMMATHO.
- ** Abdomen alas posticas paullo superans. 15. GIPPIUS.

- ii. Alæ longiusculæ.
 - * Alæ posticæ breves. - - 36. ECPANTHERIA.
 - ** Alæ posticæ sat longæ.
- iii. Alæ latæ.
 - * Antennæ subtus subpubescentes. - 27. AMANA.
 - ** Antennæ subtus obtuse serratæ.
 - † Alæ angulatæ. - - 26. THALAINA.
 - †† Alæ rotundatæ.
 - ‡ Abdomen alas non superans. 60. ANAPHELA.
 - ‡‡ Abdomen alas superans. - 34. ALPENUS.
- B. *Caput et thorax squamis appressis.*
 - a. Palpi capite non longiores.
 - i. Antennæ simplices.
 - * Palpi non clavati.
 - † Palpi et femora squamis appressis, illi adscendentes. Tibiæ anticæ femoribus multo breviores.
 - ‡ Abdomen alas posticas non superans. 24. HYPERCOMPA.
 - ‡‡ Abdomen alas posticas superans.
 - § Palpi brevissimi.
 - × Proboscis longiuscula. 18. CREATONOTOS.
 - ×× Proboscis brevis. - 32. AMPHISSA.
 - §§ Palpi breves. - - - 37. ALOA.
 - §§§ Palpi mediocriter longi. - 23. IDALUS.
 - §§§§ Palpi longiusculi. - - 21. SCAPTIVS.
 - † Palpi et femora hirsuta, illi porrecti. Femora et tibiæ antica æquilonga.
 - ‡ Antennæ corporis dimidio non longiores. 5. PERICALLIA.
 - ‡‡ Antennæ corporis dimidio multo longiores. 52. AMERILA.
 - ** Palpi clavati. - - - 56. CANOPUS.
 - ii. Antennæ maris breviter pectinatæ, fœminæ serratæ. 25. AREAS.
 - iii. Antennæ pectinatæ.
 - * Abdomen alas posticas non superans. 6. DARITIS.
 - ** Abdomen alas posticas superans.
 - † Alæ latæ. - - - 13. APANTESIS.
 - †† Alæ angustæ.
 - ‡ Tibiæ posticæ calcaribus sat longis. 20. ARARA.
 - ‡‡ Tibiæ posticæ calcaribus minimis. 19. EVIUS.
 - b. Palpi capite longiores. - - - 57. ANAXITA.

Genus 1. TRICHOSOMA.

Statura robustior. Palpi hirsuti. Proboscis distincta. Antennæ maris pectinatæ, fæminæ ciliatæ. Alæ fæminæ spuria. Volatus maris meridianus. Larva subgregaria. Pupa brevis, segmentis immobilibus.

Trichosoma, *Ramb. Ann. Soc. Ent. Fr.* i. 272; *Boisd.*; *Herr.-Schæff.*

Eyprepia, p., *Ochs.*; *Treits.*

Bombyx, p., *Esper*; *Hübner*.; *Freyer.*

Arctia, p., *Hübner*.; *Meig.*

Chelonia, p., *God.*

This genus and *Orgyia* seem to connect the *Arctiidae* with the *Liparidae*.

Europe.

A. Cinereum. - - - - - parasitum, *Esper.*

B. Nigrum.

A. Alæ anticæ strigis anastomosantibus carneis; posticæ flavæ, maculis nigris. - - - Corsicum, *Ramb.*

B. Alæ quatuor strigis anastomosantibus albis. Bœticum, *Ramb.*

C. Fuscum. - - - - - Pierreti, *Boisd.*

1. TRICHOSOMA PARASITUM.

Cinereum; alæ anticæ maculis elongatis nigris.

Bombyx parasita, *Esper, Schmett.* iii. *Cont.* 12, pl. 92, f. 1, 7.

Hübner. Bomb. pl. 33, f. 146; pl. 53, f. 228; *Larv. Lep.* iii.

Bomb. ii. *Veræ, K.* f. fig. 2.

Eyprepia parasita, *Ochs. Schmett. Eur.* iii. 345, 23.

Chelonia parasita, *God. Pap. de France*, iv. 347, 107, pl. 36, f. 1, 2.

Boisd. Ind. Meth. 43.

Trichosoma parasitum, *Boisd. Icon. Hist. Lépid.* 121, 2, pl. 60,

f. 5, 6. *Herr.-Schæff. Samml. Eur. Schmett.* ii. *Text, Suppl.* 141, 1.

Arctia parasita, *Hübner. Verz. Schmett.* 183, 1883. *Meig. Syst.*

Beschr. Eur. Schmett. iii. 34, 16, pl. 85, f. 3.

Bombyx (Eyprepia) parasita, *Freyer, Neuere Beitr. Schmett.* iii. 5, pl. 194.

Trichosoma parasita, *Speyer, Ent. Zeit. Stett.* xiii. 315, 25.

Hungary. Valesia.

a, b. Europe. From M. Becker's collection.

2. TRICHOSOMA CORSICUM.

Mas. *Alæ anticæ nigræ, rivulis fulvo-roseis; posticæ fulvæ, nigro maculatæ. Fœmina, vix hemiptera; alæ ochraceæ, fusco maculatæ.*

Trichosoma Corsicum, Ramb. Ann. Soc. Ent. Fr. i. 272, pl. 8, f. 6. Boisd. Icon. Hist. Lépid. 119, 1, pl. 60, f. 7, 9. Duponch. Treitsch. Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 141, 3.

Bombyx Corsica, Freyer, Neuere Beitr. Schmett. ii. 87, pl. 146, f. 3. a—d. Corsica. From M. Becker's collection.

3. TRICHOSOMA BÆTICUM.

Mas. *Alæ nigræ, rivulis maculisque albo-rufescentibus. Fœmina aptera.*

Trichosoma Bæticum, Ramb. Ann. Soc. Ent. Fr. v. 587, pl. 17 A. f. 1—4. Boisd. Duponch. Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 141, 2.

Bombyx Bætica, Freyer, Neuere Beitr. Schmett. iv. 41, pl. 313, f. 4. a, b. South Spain. From M. Becker's collection.

4. TRICHOSOMA PIERRETI.

Nigro-fuscum; alæ brevissimæ, fuscæ; femora antica fulva.

———— Carreno, Ann. Soc. Ent. Fr. x. 205.

Trichosoma Pierreti, Boisd. Ann. Soc. Ent. Fr. x. Bull. Ent. xxviii.

South Europe.

Africa.

5. TRICHOSOMA MAURITANICUM.

Alæ anticæ supra subtusque nigro-fuscæ, ad margines extus maculis duabus albido-flavescentibus ornatae; alæ posticæ supra subtusque et angulo anali flavo aurantiacis (hoc fortiter fusco-nigro marginato), macula trigona fuscaque ornatis; caput et thorax nigra, flavescente pilosa; abdomen supra nigrum, subtus piloso flavescentis; antennæ sat elongatæ, flavescentes, setis nigris.

Trichosoma mauritanicum, Lucas, Explor. Scient. de l'Alger. Anim. Artic. iii. 376, 81, pl. 3, f. 5.

Algeria.

6. TRICHOSOMA ALGIRICUM.

Mas. *Flavescente fimbriatum; caput, thorax et abdomen nigra, flavescente pilosa; antennæ flavescentes, fortiter pectinatae; alæ anticæ supra nigro subflavescente tinctæ, flavo transversim trajectæ, puncto flavescente ad apicem ornatae, subtus flavæ, antice nigrescentes; alæ posticæ flavæ, vitta marginali lata nigrescente.*

Trichosoma algericum, Lucas, Explor. Scient. de l'Alger. Anim. Artic. iii. 376, 82, pl. 3, f. 6.

Algeria.

Asia.

7. TRICHOSOMA LÖWII.

Fœm. *Nigrum; coxis anticis extus femoribusque omnibus supra coccineis; alæ brevissimæ rotundatæ, anticæ atræ postice carneæ, posticæ roseæ. Long. 8—9 lin.*

Trichosoma Löwii, Zeller, Ent. Zeit. Stettin. vii. 9.

Asia Minor.

Genus 2. EUPREPIA.

Antennæ simplices, *maris* vix serratæ. Tibiæ anticæ calcare forti inflexo; posticæ quadricalcaratæ. Alæ *fæminæ* completæ.

Bombyx, p., *Fabr.; Borkh.; Esp.; Hübn.*

Noctua, p., *De Vill.*

Eyprepia, p., *Ochs.*

Euprepia, *Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 141.*

Europe.

1. EUPREPIA PUDICA.

Rosea; caput, thoracis maculæ tres et alarum maculæ angulato-irregulares nigra; abdomen purpureum, seriebus tribus macularum nigrarum.

Phalæna pudica, Gmel. ed. Syst. Nat. i. 24, 19, 516.

Bombyx pudica, Fabr. Mant. Ins. ii. 129, 173. Ent. Syst. iii. 1, 471, 197. Oliv. Enc. Méth. v. 92, 229. Borkh. Eur. Schmett. iii. 234, 472, 73. Esp. Schmett. iii. 177, pl. 33, f. 1; Cont. 5, 26, pl. 84, f. 1, 48. Hübn. Bomb. 134, 6, pl. 31, f. 134; Beitr. ii. 81, 4, 1, pl. f. G. 1, 2.

Chelonia pudica, *God. Pap. de France*, iv. 313, pl. 32, f. 1, 2.
Petagna.

————— *Ernst, Pap. d'Eur.* iv. 133, pl. 148, f. 193.

Noctua tessellata, *De Vill. Ent. Linn.* ii. 274, 374, pl. 5, f. 18.

Arctia pudica, *Latr. Gen. Crust. et Ins.*

Callimorpha pudica, *Meig. Handb.* 143, 100; *Syst. Besch. Eur. Schm.* iii. 4, 2, 6, pl. 83, f. 6.

Eyprepia pudica, *Ochs. Schm.* *Eur.* iii. 334, 17; iv. 61, 18.

Euprepia pudica, *Hübner. Verz. Schm.* 181, 1863. *Herr.-Schæff. Samml. Eur. Schm.* ii. *Text, Suppl.* 141. *Ramb. Faun. Cors. Costa, Faun.*

a, b. Europe. From M. Becker's collection.

c, d. Europe. From Mr. Milne's collection.

Siberia.

2. EUPREPIA? FUNEREA.

Atra, ciliis concoloribus; abdomen ochraceo cingulatum.

Euprepia funerea, *Eversm, Bull. Soc. Imp. Nat. Mosc.* 1847, 3, 77, 12, pl. 5, f. 5.

Eastern Siberia.

Mexico.

3. EUPREPIA DOCTA.

Alba; caput et thorax pallide testacea, illum subtus fuscum; thorax fusco trivittatus; abdomen rufum, apice fuscum, subtus flavum fusco marginatum; alæ anticæ fasciis quatuor macularibus fuscis, posticæ margine interno rufo.

Var. a. White. Head and thorax pale testaceous. Head brown beneath. Palpi and antennæ black. Thorax with three broad brown stripes. Abdomen red, with a brown tip; under side brown, with a yellow disk. Fore wings with ten brown spots, which form four imperfect bands. Hind wings red along the inner border. Length of the body 6—8 lines; of the wings 16—18 lines. *Var. β*, like *Var. a.* Hind part of the abdomen with a brown stripe. Spots on the fore wings larger, and accompanied by three elongated dots. *Var. γ*, like *Var. β*. Stripe of the abdomen longer. Spots on the fore wings still larger. Hind wings with brown spots along the hind border.

a. Guatemala. From M. Sallé's collection.

b. Mexico. From M. Hartweg's collection.

c. ———? Presented by E. Doubleday, Esq.

Genus 3. ESTIGMENE.

Antennæ maris extus pectinatae, intus serratae; fæminæ serratae.
Tibiæ anticæ calcare forti inflexo; posticæ quadricaratae.

Bombyx, p., *Fabr.*; *Schr.*; *Borkh.*; *Esp.*; *Panz.*; *Goëze*; *Brahm.*;
Schwarz; *Illig.*; *Vieweg*; *Hübner*; *Treits*.

Eyprepia, p., *Ochs*.

Chelonia, p., *God.*

Arctia, p., *Boisd.*

Estigmene, *Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl.*
142.

1. ESTIGMENE LUCTIFERA.

Nigra; abdomen et alarum posticarum angulus analis flava, illum serie triplici punctorum nigrorum.

Phalæna Bombyx lentifera, *Gmel. ed Syst. Nat. i. 5, 2424, 533.*

————— *Ernst, Pap. d' Eur. iv. 168, pl. 159, f. 206, a—d.;*
pl. 160, f. 206, e—g.

Bombyx luctifera, *Fabr. Mant. Ins. ii. 123, 132; Ent. Syst. iii.*
1, 453, 143. *Oliv. Enc. Méth. v. 77, 180. Wien. Verz. 54,*
f. 4. *Illig. N. Ausg. Dess. 1, 94, 4. Hübner. Bomb. 138, 1, pl.*
34, f. 147. *Borkh. Schmett. iii. 232, 72; Rhein. Mag. i. 343,*
184. *Vieweg, 61, 63, pl. Verg. 1, H. Brahm, Ins. Kal. 273,*
162. *Esp. Schmett. iii. 222, pl. 43, f. 1—5. Panz. Faun.*
Germ. 9, 17. Schwarz, Baup. 574, 677, 757. Kleem. Beitr.
249, pl. 30, f. 1—5. *Treits. Hülfsb. Schmett. 226, 107.*

Bombyx cæsaria, *Goëze, Entom. Beytr. iii. 3, 63, 93.*

Bombyx Morio, *Schr. Faun. Boic. ii. 1, 250, 1423.*

Arctia luctifera, *Latr. Gen. Crust. et Ins. Meig. Handb. 144, 104;*
Syst. Besch. Eur. Schmett. iii. 35, 17, pl. 85, f. 5. Boisd.

Eyprepia luctifera, *Ochs. Schmett. Eur. iii. 349, 25; iv. 61, 26.*

Euprepia luctifera, *Döring, Ent. Zeit. Stett. ix. 304, 13.*

Chelonia luctifera, *God. Pap. de France, iv. 354, 110, pl. 36, f. 5.*

Estigmene luctifera, *Hübner. Verz. Schmett. 184, 1898. Herr.-*
Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 142. Speyer,
Ent. Zeit. Stett. xiii. 315, 23.

South France. Switzerland. Austria.

a. Nice. From Dr. Leach's collection.

b. Europe. From Mr. Milne's collection.

c, d. Europe. From M. Becker's collection.

Genus 4. ARCTIA.

Statura robusta. Caput et thorax pilis longis hirta. Proboscis brevissima. Palpi porrecti, breves, pilosissimi; articulus 1us 2o longior; 3us subacutus. Antennæ graciles, sat longæ. Thorax haud cristatus. Abdomen annulatum, robustum. *Mas.* — Antennæ pectinatae. *Fæm.* — Antennæ serratae, nonnunquam pectinatae. Tibiæ posticæ quadricaratae; anticæ inermes. Alæ anticæ rivulosæ vel maculatæ, discolores, luteo vel rubro, maculatæ; posticæ vena 5a conspicua. *Fæminæ mares* adæquantes vel superantes. Volatus nocturnes. Larvæ solitaires.

Arctia, p., *Schr.*; *Latr.* (olim); *Steph.*

Eyprepia, p., *Ochs.*

Chelonia, p., *Latr.*; *God.*; *Boisd. Gen. et Ind. Méth.* 63; *Herr.-Schæff.*

Synopsis of Species.

Europe.

A. Alæ pallidæ, maculis nigris irregularibus, anticæ quatuor costalibus subtransversis.

A. Alæ anticæ carneo subcinereæ. - - - Zoraida, *Grasl.*

B. Alæ anticæ fusco-rufæ. - - - hemigena, *Grasl.*

B. Alæ anticæ hepaticæ, posticæ purpureæ, omnes nigro irregulariter maculatæ.

A. Maculæ alarum anticarum limbales duæ aut tres.

honesta, *Frey.*

B. Maculæ alarum anticarum limbales nullæ.

A. Antennæ latiores. - - - maculosa, *Gmel.*

B. Antennæ angustiores. - - - Simplonica, *Anderr.*

C. Alæ anticæ nigræ, costis omnibus et strigis transversis reticulatim conjunctis pallidis.

A. Carnea, nigro varia. - - - Dahurica, *Boisd.*

B. Nigra, albido varia. - - - Quenselii, *Payk.*

D. Alæ anticæ fuscæ aut nigræ, fasciis transversis aut maculis albidis.

A. Alæ anticæ fasciis plus minusve interruptis transversis.

A. Abdominis maculæ dorsales nigræ anum versus dilatatae; anus omnino niger.

a. Alæ posticæ roseo-purpureæ.

i. Minor. Alæ anticæ unifasciatæ. - Latreillii, *God.*

ii. Media. Alæ anticæ bifasciatæ. - - - casta, *Fabr.*

iii. Major. Alæ anticæ fasciis niveis fulvo-cinctis.

Hebe, *Linn.*

- b. Alæ posticæ flavæ.
 i. Alæ posticæ limbum versus coccineæ. fasciata, *Esp.*
 ii. Alæ anticæ limbo et margine interiore cruce et striga prope basim albis. - - - - Flavia, *Cram.*
- B. Abdominis maculæ dorsales nigræ, anum versus minores; anus innotatus.
 a. Fusca. Alæ posticæ cinnabarinæ, cæruleo maculatæ. Caja, *Linn.*
 b. Nigra. Alæ anticæ fasciis macularibus albis; posticæ rubræ, basi fasciæque nigris. - - Thulea, *Dalm.*
 c. Cinnamomea. Alæ anticæ maculis laceratis citrinis, nigro-cinctis; posticæ aurantiacæ, maculis nigris. Lapponica, *Thunb.*
- B. Alæ anticæ maculis rotundatis separatis.
 A. Alæ anticæ nigræ, maculis albis. - - villica, *Linn.*
 B. Alæ anticæ ferrugineæ, maculis flavis.
 a. Alæ posticæ aurantiacæ. - - - - aulica, *Linn.*
 b. Alæ posticæ flavæ, limbum versus coccineæ.
 i. Alæ posticæ maculis 3 nigris. - - curialis, *Borkh.*
 ii. Alæ posticæ maculis 6—7 nigris. - - Dejeanii, *God.*
- E. Alæ anticæ flavæ. - - - - - purpurea, *Linn.*

1. ARCTIA ZORAIDA.

Alæ anticæ carneo-subcinereæ, ad apicem paululum imbutiores maculis quatuor apicalibus nigris transversis, 1a sinuata, 2a oblonga cæteris majore, 3a Y similis situ inverso, 4a fere quadrata, maculis duabus posticis concoloribus, externa punctiformi; posticæ paululum dilutiores, subdiaphanæ, lunula centrali nigricante, maculisque tribus marginalibus pyriformibus concoloribus; thorax villosus, castaneo-fuscus.

Chelonea Zoraida, *Graslin, Ann. Soc. Ent. Fr. v. 561, pl. 17, B. f. 3. Duponch. Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 144, 15, 1.*

Granada.

2. ARCTIA HEMIGENA.

Alæ fusco-rufæ, apice subroseæ; anticæ apice maculis quatuor nigris transversis, duabus non longe a corpore oblongis coadunatis, 3a sinuosa producta sursum dilatata, 4a 3a subsimili sed minore; maculis quoque in infima parte tribus nigris,

parvis ferè rotundis, intermedia majore; posticæ paululum dilutiores, subdiaphanæ, lunula centrali nigricante, maculis duabus seu aliquando tribus parvis concoloribus majoribus; thorax villosus castaneo-fuscus, pilis subcinereo-carneis circumdatus; antennæ pectinatæ, angustiores. Fœminæ semi-aptera. Larva nigra.

Chelonia hemigena, *Graslin, Ann. Soc. Ent. Fr. 2me Sér. viii. 3, pl. 10, f. 9—11.*

South Spain.

3. ARCTIA HONESTA.

Abdomen obscure roseum, nigro maculatum; alæ anticæ rufo-flavæ, maculis nigris albido cinctis plerumque triangularibus; posticæ obscure roseæ, maculis nigris.

Euprepia honesta, *Freyer, Neue Beitr. Schmett. 96, pl. 344, f. 2; Ent. Zeit. Stett. ii. 91. Herr.-Schæff. Samml. Eur. Schmett. ii. Text, Suppl. 145, 17, 3.*

Germany.

4. ARCTIA MACULOSA.

Fusca; thorax nigro maculatus; alæ anticæ nigro maculatæ, posticæ roseæ, fusco maculatæ.

Bombyx maculosa, *Fabr. Mant. Ins. ii. 129, 174; Ent. Syst. iii. 1, 471, 199. Oliv. Enc. Méth. v. 93, 231. Esp. Schmett. iii. 179, pl. 33, f. 4, 5. Illig. N. Ausg. Dess. i. 87, 10. Knoch, Beitr. iii. 100, pl. 5, f. 2. Borkh. Eur. Schmett. iii. 196, 59. Rhein. Mag. i. 340, 177. Lang. Verz. ii. 92, 714, 715. Brahm, Ins. Kal. 199, 102. Hübn. Bomb. 137, 16, pl. 33, f. 144, 145; Larv. Lep. iv. Bomb. ii. Veræ K. f. 1, 2. Wien. Verz. 54. Fam. E. 10. Petagona. Treits. Hulfsb. Schmett. 225, 105.*

Phalæna maculosa, *Gmel. ed. Syst. Nat. i. 5, 2419, 518.*

———, *Ernst, Pap. d'Eur. iv. 148, pl. 154, f. 199, a—h.*

Arctia maculosa, *Schr. Faun. Boic. ii. 2, 153, 10. Huln. Verz. Schmett. 186, 1831. Meig. Handb. 143, 102. Syst. Beschr. Eur. Schmett. iii. 34, 15, pl. 85, f. 2.*

Eyprepia maculosa, *Ochs. Schmett. Eur. iii. 343, 22; iv. 61, 23. Boisd.*

Chelonia maculosa, *God. Pap. de France, iv. 349, 108, pl. 36, f. 3.*

Bombyx (Eyprepia) maculosa, *Freyer, Neuere Beitr. 95, pl. 344, f. 1; Ent. Zeit. Stett. ii. 91.*

Chelonia maculosa, Herr.-Schæff. *Samml. Eur. Schmett.* ii. *Text*,
Suppl. 145, 18, 4. *Speyer, Ent. Zeit. Stett.* xiii. 314, 17.

Var. *Chelonia Chardinyi*, *Duponch.*

Pyrenees. Hungary. Russia.

a—d. Europe. From M. Becker's collection.

5. ARCTIA SIMPLONICA.

A. maculosæ affinis; antennæ multo graciliores; alæ anticæ
 cinereæ, maculis elongatis nigris; posticæ roseæ, fascia basali
 obsoleta, macula centrali margineque latiore nigris.

Chelonia Simplonica, *Anderregg. Boisd. Gen. et Ind. Méth. Eur.*
Lép. 64, 527.

Bombyx (*Eyprepia*), *Freyer, Neuere Beitr. Schmett.* v. 16, 679, pl.
 392, f. 3—5.

Valais.

6. ARCTIA DAHURICA.

Carnea; occiput, strigæ tres corporis, maculæque numerosæ inter-
 costales alarum anticarum nigra; alæ posticæ croceæ, basi et
 ciliis flavis, maculis nigris.

Chelonia Dahurica, *Boisd. Icon. Hist. Lépid.* 126, 2, pl. 60, f. 1.
Herr.-Schæff. Samml. Eur. Schmett. ii. *Text*, *Suppl.* 145,
 19, 5.

Siberia. California.

7. ARCTIA QUENSELII.

Nigra; corporis strigis longitudinalibus, alarum ciliis, anticarum
 costis, posticarum arcubus albis; anticarum strigis transversis
 anastomosantibus flavis.

Bombyx Quenselii, *Payk.*

Bombyx strigosa, *Fabr.*

Chelonia Quenselii, *Zett. Ins. Lapp.* 930, 5. *Duponch. Herr.-*
Schæff. Samml. Eur. Schmett. ii. *Text*, *Suppl.* 145, 20, 6.
Speyer, Ent. Zeit. Stett. xiii. 287, 10.

Norway. Lapland. Tyrol.

8. ARCTIA LATREILLII.

Minor; alæ anticæ fascia pone basim cruce juncta.

- Chelonia Latreillii*, *God. Pap. de France*, iv. 318, 97, pl. 33, f. 1.
Boisd. Icon. Hist. Lépid. 124, 1, pl. 59, f. 5. *Duponch.*
Herr.-Schæff. Samml. Eur. Schmett. ii. *Text, Suppl.* 146, 21,
 7. *Graells, Ann. Soc. Ent. Fr. 2me Sér.* i. 359, pl. 12, No. 2.
Arctia Latreillii, *Meig. Syst. Besch. Eur. Schmett.* iii. 30, 7, pl. 83,
 f. 5.
Bombyx (Eyprepia) Latreillii, *Freyer, Neuere Beitr. Schmett.* v. 58,
 732, pl. 418, f. 2.

Catalonia.

9. ARCTIA CASTA.

Media ; alæ anticæ fascia pone basim lata, altera pone medium, ramum versus angulum ani emittente.

- Bombyx casta*, *Fabr. Mant. Ins.* ii. 129, 74 ; *Ent. Syst.* iii. 1, 471,
 198. *Oliv. Enc. Méth.* v. 92, 230. *Esp. Schmett.* iii. 177, pl.
 33, f. 2. *Cont.* 12, 77, pl. 92, f. 8—12. *Borkh. Eur. Schmett.*
 iii. 177, 51. *Wien. Schmett.* 59, 10. *Knoch, Beitr.* iii. pl. 5,
 f. 2. *Hübner. Bomb.* 135, 7, pl. 31, f. 137 ; pl. 51, f. 219.
Treits. Hulfsb. Schmett. 225, 104. *Petagna.*
Eucharia casta, *Hübner. Verz. Schmett.* 181, 1866.
Eyprepia casta, *Ochs. Schmett. Eur.* iii. 341, 21 ; iv. 61, 22.
Phalæna casta, *Gmel. ed. Syst. Nat.* i. 5, 2419, 5, 17.
Chelonia casta, *God. Pap. de France*, iv. 316, 96, pl. 32, f. 3, 4.
Boisd. Herr.-Schæff. Samml. Eur. Schmett. ii. *Text, Suppl.*
 146, 22, 8. *Speyer, Ent. Zeit. Stett.* xiii. 313, 16.
Arctia casta, *Meig. Handb.* 143, 101 ; *Syst. Besch. Eur. Schmett.*
 iii. 30, 8, pl. 83, f. 7.
Bombyx (Eyprepia) casta, *Freyer, Neuere Beitr. Schmett.* ii. 79,
 pl. 141.

a—c. Europe.

10. ARCTIA HEBE.

Major ; alæ anticæ atræ, fasciis niveis fulvo-cinctis quinque, ambabus posterioribus in literam H junctis ; posticæ sanguineæ, atro maculatæ.

- Arctia Hebe*, *Schr. Faun. Boic.* ii. 2, 152, 2. *Latr. Gen. Crust. et*
Ins. Meig. Handb. 142, 98, pl. 11, f. 2 ; *Syst. Besch. Eur.*
Schmett. iii. 28, 4, pl. 84, f. 1. *Steph. Ill. Brit. Ent. Haust.*
 ii. 71, 4. *Wood, Ind. Ent.* pl. 54, f. 30.
Phalæna Bombyx Hebe, *Linn. Syst. Nat.* ii. 820, 40. *Gmel. ed.*
Syst. Nat. i. 5, 2420, 40.
Bombyx Hebe, *Fabr. Sp. Ins.* ii. 197, 119 ; *Mant. Ins.* ii. 128,
 169 ; *Ent. Syst.* iii. 1, 469, 193. *Oliv. Enc. Méth.* v. 90,

224. *Schæff. Icon. Nomencl. Panz.* 40, pl. 28, f. 1, 2. *Esp. Schmett.* iii. 181, pl. 34, f. 1—4. *Panz. Faun. Ins. Germ.* 16, 24. *Borkh. Eur. Schmett.* iii. 172, 49; *Rhein. Mag.* i. 337, 170. *Fuessl. N. Mag.* iii. 2, 145, 14. *Vieweg. Tab. Verz.* i. 57, 55. *Lang. Verz.* ii. 89, 684, 685. *Brahm, Ins. Kal.* 24, 9, 316, 201; 382, 258. *Schwarz, Raup.* 19, 100, 513, 652, 753. *Hübner. Bomb.* 133, 2, pl. 30, f. 129; *Verz. Larv. Lep.* iii. *Bomb.* ii. *Veræ, K, a, b, f. 1, a.* *Wien. Verz.* 52. *Fam. E. 2.* *Illig. N. Ausg. dess.* i. 78, 2. *Petagna. Treits. Halbsb. Schmett.* 224, 103.

———, *Geoff. Hist. Ins.* ii. 109, 9. *Mouff. Ins.* 93, 18, f. 4, 5. *Röes. Ins. Bel.* iv. 186, pl. 27, f. 1, 2; v. pl. 13, f. 1—4. *Kleeman, Beitr.* pl. 13, f. 1—4. *Frisch. Besch. Ins.* vii. 14, 99, pl. 9, f. 1. *Schæff. Elem.* pl. 98, f. 1. *Ernst, Pap. d'Eur.* iv. 120, pl. 143, f. 189, a—k. *Scriba, Beitr.* ii. pl. 7, f. 3, var. *Naturf.* viii. 106, 32.

Phalæna festiva, Hufnagel, Tab. Berl. Mag. ii. 4, 416, 32, 437.

Eucharis Hebe, Hübn. Verz. Schmett. 181, 1865.

Eyprepia Hebe, Ochs. Schmett. Eur. iii. 339, 20; iv. 61, 21. *Costa, Faun. Döring, Ent. Zeit. Stett.* ix. 303, 6.

Chelonia Hebe, God. Pap. de France, iv. 306, 93, pl. 31, f. 1, 2. *Koch, Raup. und Schmett. Witten. Isis,* 1848, 524. *Herr.-Schæff. Samml. Eur. Schmett.* ii. *Text, Suppl.* 146, 23, 9. *Speyer, Ent. Zeit. Stett.* xiii. 313, 15.

a—d. Europe. From M. Becker's collection.

e. Europe.

Var.? *Chelonia intercalaris, Eversm.*

Altai.

11. ARCTIA FASCIATA.

Abdomen roseum maculis dorsalibus nigris apicem versus dilatatis, ano omnino nigro; alæ anticæ fuscæ rivulis maculis albidis; posticæ flavæ, nigro maculatæ, limbum versus coccineæ.

Bombyx fasciata, Esper, Schmett. iii. 178, pl. 33, f. 3; 47, pl. 87. *Cont.* 8, f. 1. *De Vill. Ent. Linn.* ii. 152, 56, pl. 5, f. 4. *Borkh. Eur. Schmett.* iii. 176, 50.

Bombyx tigrina, De Vill. Ent. Linn. ii. 156, 82, pl. 5, f. 5. *Borkh. Eur. Schmett.* 235, 74.

———, *Ernst, Pap. d'Eur.* pl. 3. *Suppl.* pl. 3, f. 187.

Bombyx gratiosa, Hübn. Bomb. 134, 5, pl. 31, f. 133.

Euprepia gratiosa, Hübn. Verz. Schmett. 181, 1864.

Eyprepia fasciata, Ochs. Schmett. Eur. iii. 333, 16; iv. 61, 17.

Chelonia fasciata, *God. Pap. de France*, iv. 310, 94, pl. 31, f. 3, 4, *Boisd. Herr.-Schæff. Samml. Eur. Schmett.* ii. *Text, Suppl.* 146, 24, 10. *Latr. Gen. Crust. et Ins.* 142.

Arctia fasciata, *Meig. Handb.* 142, 96; *Syst. Besch. Eur. Schmett.* iii. 27, 3, pl. 83, f. 4.

a, b. Europe. From M. Becker's collection.

12. ARCTIA FLAVIA.

Abdomen rubrum, maculis dorsalibus nigris apicem versus dilatatis, ano omnino nigro; alæ anticæ nigræ; limbo et margine interiore cruce et striga prope basin albis, striga longitudinali cum basi cohærenti; posticæ flavæ, nigro maculatæ.

Phalæna Flavia, *Fuessl. Alt. Mag.* ii. 1, 70, 2, pl. 1, f. 11. *Cram. Pap. Exot.* pl. 397, f. 0.

Bombyx Flavia, *Esp. Schmett.* iii. 390, pl. 78, f. 1. *Borkh. Eur. Schmett.* iii. 171, 48. *Fabr. Ent. Syst. Suppl. Oliv. Enc. Méth.* v. 89, 222.

———, *Ernst, Pap. d' Eur.* iv. 119, pl. 142, f. 188.

Bombyx Virgo, *Hüb. Bomb.* 134, 4, pl. 30, f. 132. *Geyer, Suppl.*

Zoote Flavia, *Hüb. Verz. Schmett.* 181, 1869.

Eyprepia Flavia, *Ochs. Schmett. Eur.* iii. 338, 19; iv. 61, 20.

Chelonia Flavia, *God. Pap. de France*, iv. 304, 92, pl. 30, f. 4. *Boisd. Icon. Hist. Lépid.* 130, 5, pl. 59, f. 5. *Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text*, 146, 25, U.

Arctia Flavia, *Meig. Handb.* 143, 99; *Syst. Besch. Eur. Schmett.* iii. 27, 2, pl. 83, f. 8.

Siberia. Switzerland.

13. ARCTIA CAJA.

Fusca; abdomen rubrum, maculis dorsalibus nigris apicem versus minoribus, ano innotato; alæ anticæ rivulis albis ciliis concoloribus, posticæ rubræ maculis orbiculatis atro-cæruleis.

Phalæna Bombyx Caja, *Linn. Syst. Nat.* i. 2, 819, 38; *Faun. Suec.* ed. 1, 829, 2, 1131, ed. 2, 300, 1131. *Gmel. ed. Syst. Nat.* i. 5, 2418, 38.

Bombyx Caja, *Fabr. Sp. Ins.* ii. 198, 122; *Mant. Ins.* ii. 128, 172. *Ent. Syst.* iii. 1, 470, 196. *Oliv. Enc. Méth.* v. 92, 228, pl. 61, f. 262. *Hüb. Bomb.* 134, 3, pl. 30, f. 130, 131; *Larv. Lep.* iii. *Bomb.* ii. *Veræ*, K. c. f. 1, a—c. *Wien. Verz.* 52, *Fam. E.* 1. *Illig. N. Ausg. dess.* i. 77, 1. *Berk. Syn.* i. 135. *Barb. Gen.* pl. 10, f. 38. *Don. Hist. Nat. Brit. Ins.* i. pl. 15. *Stew. El. Nat. Hist.* ii. 149. *Turt. Syst. Nat.* iii. 223. *Schæff. Icon. Nomencl. Panz.* 41, pl. 29, f. 7, 8.

Esp. Schmett. iii. 167, pl. 30, f. 1—5; pl. 31, f. 1—4; pl. 32, f. 1—4. *Borkh. Eur. Schmett.* iii. 162, 47; *Rhein. Mag.* i. 336, 169. *Sulz. Kennz. Ins.* pl. 16, f. 94. *Müll. Faun. Fridr.* 41, 371. *Fuessl. Schweiz. Ins.* 34, 656; *Alt. Mag.* i. 2, 285; *N. Mag.* 2, 146, 31. *Hufnagel, Pl. in Berl. Mag.* ii. 4, 404, 13. *Naturf.* ii. 17, 4, pl. 1, f. 4; 17, pl. 3, 17; 102, 13, pl. 8; 137, pl. 19. *Schr. Faun. Boic.* ii. 1, 257, 1431. *Rossi, Faun. Etr.* ii. 176, 1098; *ed. Illig.* 280, 1098. *Vieweg. Pl. Verz.* i. 57, 54. *Lang. Verz.* ii. 88, 680—683. *Brahm. Ins. Kal.* 216, 112. *Schwarz, Raup.* 83, 221, 758. *Treits. Hulfsb. Schmett.* 224, 102.

———, *Mouff. Ins.* 93, f. 15. *Aldr. Ins.* 246, f. 11, 12. *Gæd. Ins.* i. pl. 17. *Rai, Ins.* 151, 3; 152, 7. *Geoffr. Ins.* ii. 108, 8. *Deg. Ins.* i. 1, 147, pl. 12, f. 1—9. *Röes. Ins.* i. 2, 1, pl. 1, f. 1—8. *Frisch, Ins.* ii. 38, 10, pl. 9, f. 1—3. *Sepp, Neederl. Ins.* ii. pl. 2, f. 1—7. *Reaum. Ins.* i. pl. 36, f. 6, 7. *Merian, Ins. Eur.* pl. 5. *List. Gæd. (Angl.)* 89, f. 99 (*Lat.*); 217, f. 99. *Albin, Nat. Hist. Engl. Ins.* pl. 20. *Harr. Aur.* pl. 12, f. g—m. *Ernst, Pap. d' Eur.* iv. 220, pl. 139, f. 187; pl. 140, f. 187; pl. 141, f. 187; pl. 142, f. 187. *Blank. Ins.* pl. 2, f. A, C. *Suppl. Ins.* iv. pl. 9, f. 2.

Phalæna Caja, Scop. Ent. Carn. 201, 503. *Wilkes, Nat. Hist.* 18, pl. 36.

Phalæna Bombyx erinacea, Retz. Gen. 36.

Arctia Caja, Schr. Faun. Boic. ii. 152, 1. *Meig. Handb.* 142, 97; *Syst. Beschr. Eur. Schmett.* iii. 26, 1, pl. 83, f. 1—3. *Steph. Ill. Brit. Ent. Haust.* ii. 69, 1. *Westw. & Humph. Moths,* i. 95, pl. 19, f. 9, 10.

Zoote Caja, Hübn. Verz. Schmett. 181, 1868.

Bombyx Cajus, Haw. Lep. Brit. 93.

Eyprepia Caja, Ochs. Schmett. von Eur. iii. 335, 18, 61, 19. *Curt. Brit. Ent.* i. 21.

Chelonia Caja, God. Pap. de France, iv. 300, 91, pl. 30, f. 1—3. *Zett. Ins. Lapp.* 929, 1. *Ramb. Faun. Cors.* *Koch, Raup. und Schmett. Witten, Isis,* 1848, 522. *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. *Text,* 147, 26, 11. *Speyer, Ent. Zeit. Stett.* xiii. 313, 14. *Eversm. Faun. Lep. Volg. Ural.* 164, 11.

Euprepia Caja, Döring, Ent. Zeit. Stett. ix. 304.

Europe. Siberia. United States. California.

a—c. England. From Mr. Foxcroft's collection.

d—z. England. From Mr. Stephens' collection.

aa—kk. England.

ll. Germany. From M. Hoffman's collection.

mm—rr. Europe. From M. Becker's collection.

ss. France.

tt. United States. Presented by E. Doubleday, Esq.

uu. West Coast of America. Presented by Capt. Kellett and Lieut. Wood.

The white markings on the fore wings of this species are very variable; sometimes they overspread nearly the whole surface, and in other cases they entirely disappear. The black spots on the hind wings are almost equally variable.

14. ARCTIA THULEA.

Nigra; prothorax et anus flavidi; pedes rubro annulati; alæ anticæ fasciis macularibus albis, interioribus interruptis; posticæ rubræ, basi fasciæque intramarginali inæquali nigris.

Bombyx (Arctia) Thulea, *Dalm. Anal. Entom.* 92, 2.

Chelonia Thulea, *Zett. Ins. Lapp.* 929, 2. *Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text*, 147, 29, 14.

Bombyx alpina? *Acerbi, Iter Suec. ii.* 253, 4, pl. 1, f. 4.

Lapland.

15. ARCTIA LAPPONICA.

Alæ anticæ obscure fuscae, maculis fasciisque flavis fusco marginatis; posticæ basi fuscae, apice fulvæ, nigro maculatæ.

Bombyx Lapponica, *Thunberg, Dissert. Acad. Upsal. iii.* (1791) 40, pl. f. 7. *Acerbi, Voy. Cap. Nord. iii.* 175, pl. 15, 5, 6. *Schneider, N. Mag. Ent. i.* 5, 589, 13.

Bombyx festiva, *Borkh. Eur. Schmett. iii.* 191, 56. *Schneider, N. Mag. Ent. i.* 4, 431, 13.

Bombyx lapponica, *Thunberg, Dissert. Entomol. Sistens Insecta Suecica, ii.* 40, pl. f. 7. *Acerbi, Voy. Cap. Nord. iii.* 175, pl. 15, 5, 6. *Schneider, N. Mag. Ent. i.* 5, 589, 13.

Bombyx Avia, *Hübner, Bomb.* 136, 13, pl. 53, f. 230; pl. 57, f. 247.

Bombyx festiva, *Borkh. Eur. Schmett. iii.* 191, 56. *Schneider, N. Mag. Ent. i.* 4, 431, 13.

Parasema Lapponica, *Hübner, Verz. Schmett.* 181, 1871.

Eyprepia lapponica, *Ochs. Schmett. Eur. iii.* 315, 8; iv. 60, 207, 8.

Chelonia lapponica, *God. Pap. de France, iv.* 324, 99, pl. 34, f. 1. *Zett. Ins. Lapp.* 929, 3. *Boisd. Icon. Hist. Lépid.* 128, 4, pl. 59, f. 2. *Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text*, 147, 30, 15.

Arctia Lapponica, Meig. *Syst. Besch. Eur. Schmett.* iii. 33, 13, pl. 84, f. 7.

Lapland.

16. ARCTIA VILLICA.

Nigra; abdomen luteum maculis dorsalibus nigris apicem versus minoribus, ano innotato; alæ anticæ maculis rotundatis separatis albis; posticæ luteæ nigro maculatæ.

Phalæna Bombyx villica, Linn. *Syst. Nat.* i. 2, 820, 41.

Bombyx villica, Gmel. ed. *Syst. Nat.* i. 5, 2420, 41. *Fabr. Sp. Ins.* ii. 197, 118. *Mant. Ins.* ii. 128, 168. *Ent. Syst.* iii. 1, 468, 192. *Oliv. Enc. Méth.* v. 90, 223. *Berk. Syn.* i. 135. *Donov. Nat. Hist. Brit. Ins.* ii. pl. 71. *Stew. El. Nat. Hist.* ii. 149. *Turt. Syst. Nat.* iii. 122. *Schæff. Icon. Nomencl. Panz.* 132, pl. 130, f. 1. *Esp. Schmett.* iii. 185, pl. 35, f. 1—6. *Panz. Faun. Germ.* 16—23. *V. Müll. Faun. Siles.* iii. 1, H. var. *Müll. Faun. Fridr.* 42, 376; *Zool. Dan.* 118, 1360. *Borkh. Eur. Schmett.* iii. 182, 53; *Rhein. Mag.* i. 338, 173. *Fuessl. Schweiz. Ins.* 35, 657. *N. Mag.* ii. 335, 146. *Schr. Faun. Boic.* ii. 1, 260, 1436. *Rossi, Faun. Etr.* ii. 175, 1097; ed. Illig. 280, 1097. *Hufnagel, Pl. in Bull. Mag.* ii. 4, 404, 14. *Vieweg, Pl. Verz.* i. 58, 57. *Lang. Verz.* ii. 90, 701, 702. *Brahm, Ins. Kal.* 42, 14. *Schwarz, Raup.* 18—84, 512, 653, 755. *Hübner. Bomb.* 135, 9, pl. 31, f. 136. *Larv. Léop.* iii. *Bomb.* ii. *Veræ, K.* a, b, f. 2 a. *Wien. Verz.* 53. *Fam. E. Illig. N. Ausg. dess.* i. 84, 7. *Treits. Hulfsb. Schmett.* 223, 101.

————— *Rai. Ins.* 156, 4. *Reaum.* i. pl. 31, f. 4—6. *Merian, Ins. Eur.* i. pl. 6. *Geoffr. Ins.* ii. 106, 7. *Röes. Ins.* iv. 192, pl. 28, f. 2; 197, pl. 29, f. 1—4. *Albin, Nat. Hist. Engl. Ins.* pl. 21, f. 27, a—d. *Harr. Aur.* pl. 4. *Frisch. Ins.* x. 3, pl. 2, f. 1. 2. *Sepp. Neederls, Ins.* ii. pl. 16, f. 1—7. *Ernst, Pap. d' Eur.* iv. 138, pl. 150, f. 196, a—g; pl. 151, f. 196, h—o.

Phalæna villica, Scop. *Ent. Carn.* 203, 504. *Wilkes, Nat. Hist. Ins.* 18, pl. 37.

Phalæna vidua, Poda, *Mus. Græc.* 88, 15.

Arctia villica, Schr. *Faun. Boic.* ii. 152, 7. *Latr. Gen. Crust. et Ins. Meig. Handb.* 140, 90, pl. 11, f. 3; *Syst. Besch. Eur. Schmett.* iii. 28, 5, pl. 84, f. 2. *Steph. Ill. Brit. Ent. Haust.* ii. 71, 2. *West. & Humph. Brit. Moths,* i. 95, pl. 19, f. 9, 10.

Bombyx villicus, Haw. *Lep. Brit.* 94.

Epicalia villica, Hübner. *Verz. Schmett.* 182, 1815.

Eyprepia villica, Ochs. *Schmett. Eur.* 101, 330, 15; W. 60, 16. *Curt. Brit. Ent.* i. 21.

Chelonia villica, *God. Pap. de France*, iv. 336, 104, pl. 35, f. 1.
Koch, Raup. und Schmett. Wittens. Isis, 1848, 515. *Ramb. Faun. Cors. Herr.-Schæff. Samml. Suppl. ii. Text*, 148, 31, 16. *Eur. Schmett. Speyer, Ent. Zeit. Stett. xiii. 288, 12.*

Var. β . *Maculis alarum anticarum flavidis, superioribus costæ adhærentibus, posticis tribus in fasciam intus dentatum coalitis; costa subtus phænica.*

Euprepia villica, var. *sicula*, *Zeller, Isis*, 1847, 433, 104.

Bombyx Konewkaii, *Freyer, Neue Beitr. i. 61, 178, pl. 33, f. 1, 2.*

Arctia domiduca, *Dahl. Meig. Syst. Beschr. Eur. Schmett. iii. 267, 17, pl. 123, f. 12.*

Var. γ ut α , sed *alis anticis fuscis, maculis posticis discutis; maculis alarum posticarum fuscis.*

Euprepia villica, var. *b*, *Zeller, Isis*, 1847, 433, 104.

Euprepia villica, *Costa, Faun. Döring, Ent. Zeit. Stett. ix. 303, 9.*

Var. δ . *Angelicæ, Freyer, Neuere Beitr.*

a—f. England. From Mr. Foxcroft's collection.

g—t. England. From Mr. Stephens' collection.

v—z. England.

aa—ee. Europe. From M. Becker's collection.

17. ARCTIA AULICA.

Alæ anticæ ferrugineæ flavo maculatæ; posticæ aurantiacæ, fascia prope basim, macula media duabusque limbalibus nigris.

Arctia aulica, *Schr. Faun. Boic. ii. 152, 6. Steph. Ill. Brit. Ent. Haust. ii. 71, 6. Meig. Handb. 141, 49; Syst. Beschr. Eur. Schmett. iii. 32, 11, pl. 84, f. 5—6. Wood, Ind. Ent. pl. 53, f. 41.*

Phalæna Bombyx aulica, *Linn. Syst. Nat. ii. 829. Gmel. ed. Syst. Nat. i. 5, 2433—68, 681. Faun. Suec. ed. 2, 301, 1133. Martyn, V.M. Stew. El. Nat. Hist. ii. 154. Turt. Syst. Nat. iii. 213. Wilk. Ins. 19, pl. 3, a. 3.*

Bombyx aulica, *Fabr. Sp. Ins. ii. 190, 92; Mant. Ins. ii. 122, 125. Ent. Syst. iii. 1, 450, 134. Clerck, Icon. pl. 4, f. 3. Esp. Schmett. iii. 328, pl. 65, f. 6, 7. Borkh. Eur. Schmett. iii. 190, 55; 470, 55; Rhein. Mag. i. 339, 175. Fuessl. Alt. Mag. ii. 2, 226; N. Mag. ii. 375. Schr. Faun. Boic. ii. 1, 260, 1435. Rossi, Faun. Etr. ii. 173, 1089; ed. Illig. 276, 1089. V. Müll. Faun. Siles. iii. 1, H. Lang. Verz. ii. 91, 705—707. Brahm, Ins. Kal. 147, 75, 393, 272. Schwarz, Raup. 645, 754. Hübn. Bomb. 136, 11, pl. 32, f. 139. Wien. Verz. 53. Faun. E. 6. Illig. N. Ausg. dess. i. 83, 6. Treits. Hulfsb. Schmett. 222, 99.*

- , *Albin, Ins. pl. 22. Merian, Ins. Eur. ii. pl. 8. Gronov. Zooph. 854. Watch. Naturf. 3, pl. 1, f. 8. Meineke, Naturf. 6, pl. 5, 3. Geoffr. Ins. ii. 109, 10. Naturf. iv. 141, pl. 1, f. 8; iv. 115, pl. 5, f. 3. Ernst, Pap. d'Eur. iv. 136, pl. 149, f. 195, b—f.*
- Hyphoraia aulica, Hübn. Verz. Schmett. 182, 1874.*
- Eyprepia aulica, Ochs. Schmett. Eur. iii. 324, 12; iv. 60, 13.*
- Chelonia aulica, God. Pap. de France, iv. 331, 102, pl. 34, f. 4. Boisd. Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text, 148, 32, 17. Speyer, Ent. Zeit. Stett. xiii. 287, 11.*
- Bombyx (Eyprepia) aulica, Freyer, Neuere Beitr. Schmett. ii. 106, pl. 158.*
- Euprepia aulica, Döring, Ent. Zeit. Stett. ix. 304, 10.*
- a—d. Europe. From M. Becker's collection.*
- e. Europe.*

18. ARCTIA CURIALIS.

Alæ anticæ ferrugineæ, maculis flavis; posticæ flavæ, limbum versus coccineæ, fascia prope basim, macula media duabusque limbalibus nigris.

- Arctia curialis, Meig. Syst. Besch. Eur. Schmett. iii. 32, 12, pl. 84, f. 5.*
- Bombyx maculania, Lang. Verz. ii. 91, 708, 709.*
- Bombyx curialis, Borkh. Eur. Schmett. iii. 192, 471, 57.*
- , *Ernst, Pap. d'Eur. pl. 4. Suppl. f. 195, a—f.*
- Bombyx aulica, var., Esp. Schmett. iii. 4, pl. 80. Cont. 1, f. 2, 3.*
- Bombyx civica, Hübn. Bomb. 136, 12, pl. 32, f. 140, 141; Beitr. ii. 1, 1, 11, pl. f. E.; 3, 1, 63, pl. f. F.*
- Hyphoraia civica, Hübn. Verz. Schmett. 182, 1873.*
- Eyprepia curialis, Ochs. Schmett. Eur. iii. 326, 13; iv. 60, 14.*
- Chelonia civica, God. Pap. de France, iv. 328, 101, pl. 34, f. 3. Herr.-Schæff. Samml. Eur. Schmett. 16. Text, 148, 33, 18.*
- Arctia aulica, var.?*
- a, b. Europe. From M. Becker's collection.*

19. ARCTIA DEJEANII.

Statura omnino A. civicæ illiusque forsitan varietas; alæ anticæ fusco-ferrugineæ, vitta longitudinali flexuosa punctisque quinque flavis; posticæ luteæ maculis 6—7 nigris, limboque rubricante.

- Arctia Dejeanii, Meig. Syst. Besch. Eur. Schmett. iii. 33, 14, pl. 84, f. 4.*

Chelonia Dejeanii, *God. Pap. de France*, iv. pl. 34, f. 2. *Boisd. Eur. Lep. Index Méth.* 42. *Icon. Hist. Lépid.* 126, 2, pl. 60, f. 1. *Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text*, 148, 34, 19.

Spain.

20. ARCTIA PURPUREA.

Alæ anticæ flavæ, fusco punctatæ ; posticæ rubræ nigro maculatæ.

Phalæna Bombyx purpurea, *Linn. Syst. Nat.* ii. 828, 67. *Gmel. ed. Syst. Nat.* i. 5, 21, 32, 67. *Stew. El. Nat. Hist.* ii. 154. *Turt. Syst. Nat.* iii. 221.

Bompyx purpurea, *Fabr. Sp. Ins.* ii. 196, 114; *Mant. Ins.* ii. 127, 162. *Ent. Syst.* iii. 1, 466, 185. *Oliv. Enc. Méth.* v. 87, 216. *Schæff. Icon. Nomencl. Panz.* 77, pl. 59, f. 4, 5. *Esp. Schmett.* iii. 325, pl. 65, f. 1—5; 20, pl. 83. *Cont.* 4, f. 1. *Borkh. Eur. Schmett.* iii. 193, 58; *Rhein. Mag.* i. 340, 176. *Fuessl. Schweiz, Ins.* 36, 680; *N. Mag.* iii. 2, 146, 26; 149, 77; 153, 98. *Naturf.* vi. 75, 4. *Vieweg, Pl. Verz.* i. 58, 58. *Lang. Verz.* 92, 710—713. *Brahm, Ins. Kal.* 103, 46. *Schwarz, Raup.* 89, 237, 528, 758. *Hübner. Bomb.* 137, 14, pl. 33, f. 142; pl. 53, f. 229. *Larv. Lep.* iii. *Bomb.* ii. *Veræ*, K. e. f. 1, a, b. *Wien. Verz.* 53. *Fam. E.* 9. *Illig. N. Ausg. dess.* i. 86, 9. *Treits. Hulfsb. Schmett.* 222, 98.

———, *Albin, Ins.* pl. 22. *Merian, Ins. Eur.* i. pl. 6. *Seba, Mus.* iv. pl. 59, f. 4, 5. *Geoffr. Ins.* ii. 105, 6. *Röes. Ins. Bd.* i. 2, 65, pl. 10. *Ernst, Pap. d'Eur.* iv. 145, pl. 153, f. 198.

Bombyx purpureus, *Schr. Faun. Boic.* ii. 1, 261, 1438.

Arctia purpurea, *Schr. Faun. Boic.* ii. 153, 9. *Latr. Gen. Crust. et Ins. Steph. Ill. Brit. Ent. Haust.* ii. 71, 5. *Meig. Handb.* 141, 93; *Syst. Beschr. Eur. Schmett.* iii. 31, pl. 84, f. 8. *Wood, Ind. Ent.* pl. 54, f. 40.

Rhyparia purpurea, *Hübner. Verz. Schmett.* 183, 1878.

Eyprepia purpurea, *Ochs. Schmett. Eur.* iii. 322, 11; iv. 60, 12.

Chelonia purpurea, *God. Pap. de France*, iv. pl. 35, f. 2, 3. *Koch, Raup. und Schmett. Witten. Isis*, 1848, 521. *Herr.-Schæff. Samml. Eur. Schmett.* ii. *Text*, 148, 35, 20. *Speyer, Ent. Zeit. Stett.* xiii. 288, 13.

Bombyx (Eyprepia) purpurea, *Freyer, Neuere Beitr. Schmett.* iii. 111, pl. 272, f. 3.

Callimorpha purpurea, *Eversm. Faun. Lep. Volg. Ural.* 166, 16.

Euprepia purpurea, *Döring, Ent. Zeit. Stett.* ix. 303, 3.

Europe. Siberia.

a—d. Europe. From M. Becker's collection.

North America.

A. Alæ anticæ nigræ aut fuscæ.

A. Alæ anticæ maculatæ, non vittatæ.

A. Alæ anticæ fuscæ.

a. Abdomen supra nigrum, apice rufum. *Americana*, Harris.b. Abdomen supra fuscum, apice fulvum. *Parthenos*, Harris.

B. Alæ anticæ nigræ.

a. Alæ anticæ maculis paucis. - - Placentia, Abbot.

b. Alæ anticæ maculis plurimis. - - virginalis, Boisd.

B. Alæ anticæ vittatæ.

A. Femora antica nigra, flavo notata.

a. Alæ anticæ quinque vittatæ. - - Virgo, Linn.

b. Alæ anticæ trivittatæ.

i. Alæ anticæ venis apicalibus pallidis. *Virguncula*, Kirby.

ii. Alæ anticæ venis apicalibus obscuris.

* Alæ anticæ vitta furcata. - 5. *Nais*, Drury.** Alæ anticæ vitta furcata nulla. 6. *Phyllira*, Drury.

B. Femora antica rufa. - - Dione, Fabr.

C. Alæ anticæ unimaculatæ et univittatæ. hyperborea, Curt.

B. Alæ anticæ fulvæ aut flavæ, nigro maculatæ.

A. Alæ posticæ roseæ. - - Isabella, Abbot.

B. Alæ posticæ subcinereæ. - - gelida, Mösch.

The European *Arctiæ* may be divided into four principal groups, which are represented by *A. Caja*, *A. Hebe*, *A. maculosa* and *A. Casta*. The North American species form three groups; the first with *A. Americana* belongs to the group of *A. Caja*; the second seems to be almost peculiar to North America, and comprises *A. Virgo*, *A. Dione*, *A. Nais* and *A. Phyllira*; the third is also peculiar to that region, and contains *A. Placentia*.

21. ARCTIA AMERICANA.

Alæ anticæ fuscæ, maculis rivulisque albidis; posticæ fulvo-flavæ, maculis unica media reniformi, tribusque posticis rotundis nigris; abdomen fulvum, dorso nigro quadrimaculato.

Arctia Americana, Harris, *Report on Insects injurious to Vegetation*, 246; Agassiz, *on Lake Superior*, 391, pl. 7, f. 5.

Trenton Falls. Lake Superior.

Var.? Reddish brown. Vertex and fore part of the thorax bright red. Proboscis, palpi and antennæ black. Thorax with a pale yellow band in front, and along part of each side. Abdomen reddish; disk above, except towards the tip, black. Fore wings with

about twelve pale yellow dots, which are mostly towards the borders. Hind wings luteous, blackish at the base and along the inner border, and with two black and somewhat undulating black bands, the inner one furcated in front. Legs mostly clothed with red hairs.

a. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

22. ARCTIA PARTHENOS.

Alæ anticæ obscure fuscae, maculis sparsis lactifloreis; posticæ fulvo-flavæ; basi, macula media triangulari, fasciæque postica undata nigris; abdomen supra fuscum, apice fulvum.

Arctia Parthenos, Harris, Agassiz, on Lake Superior, 390, pl. 7, f. 4. Lake Superior.

23. ARCTIA VIRGO.

Albida; thorax maculis duabus anticis vittisque tribus nigris; abdomen rufum, nigro trivittatum; alæ anticæ nigrae, vittis quinque, venis apicalibus fasciisque obliquis interruptis albidis; posticæ rufæ, nigro maculatæ.

Euplagia Virgo, Hübn. Samml. Exot. Schmett. ii. Lep. iii. Phal. ii. Veræ, viii. Callimorphæ, B. Variegatæ, 21, f. 1—4; Verz. Schmett. 180, 1859.

Arctia Virgo, Abbot and Smith, Nat. Hist. Lep. Ins. Georg. ii. 123, pl. 62.

Phalæna Virgo, Linn. Mus. Lud. Uls. 381. Clerck, Icon. pl. 45, f. 5. Gmel. ed. Syst. Nat. i. 5, 2419, 39.

Bombyx Virgo, Fabr. Sp. Ins. ii. 199, 123. Mant. Ins. ii. 129, 178. Ent. Syst. ii. Oliv. Enc. Méth. v. 93, 233.

a—d. Trenton Falls, New York. Presented by E. Doubleday, Esq.
e. Nova Scotia. From Lieut. Redman's collection.

Var.? *Thorax incarnatus, maculis quinque nigris; alæ anticæ nigrae, rivulis incarnato pallidis; posticæ rubrae, maculis quinque nigris.*

Callimorpha Parthenice, Kirby, Fauna, Bor. Amer. iv. 303, 1. North America.

24. ARCTIA DIONE.

Alæ anticæ rufescente-albidæ, nigro maculatæ et lineatæ; posticæ incarnatæ aut albidæ, maculis nigris nonnunquam flavo marginatis; abdomen incarnatum, nigro maculatum.

Phalæna (Noctua) Arge, *Drury, Ins.* i. 35, pl. 18, f. 3. *App.* ii.
 Bombyx Arge, *Oliv. Enc. Méth.* v. 93, 232.
 Bombyx Dione, *Fabr. Ent. Syst.* iii. 1, 442, 106. *Abbot and Smith, Nat. Hist. Lep. Ins. Georg.* ii. 125, pl. 63.
 Euplagia Dione, *Hübner. Verz. Schmett.* 180, 1862.
 Arctia Arge, *Hübner. Verz. Schmett.* 183, 1882.
 Spilosoma Arge, *Westw. Ed. Drury*, i. 33, pl. 18, f. 3.
 New York.

Var. α. Fore wings reddish white, with cuneiform black spots. Hind wings red, with black yellow-bordered spots.

Var. β, like *var. α*. Spots of the fore wings much larger, and forming a stripe towards the hind border.

Var. γ, like *var. β*. Spots of the fore wings still larger, and more inclined to form stripes. Spots of the hind wings without yellow borders.

Var. δ. Hind wings whitish, their spots small, and without yellow borders.

a, b. Georgia. From Mr. Abbot's collection.

c—h. United States. Presented by E. Doubleday, Esq.

i, j. From Mr. Milne's collection.

25. ARCTIA VIRGUNCULA.

Thorax flavus, maculis quinque nigris; alæ anticæ nigræ, rivulis carneo pallidis, apice radiantibus; posticæ luteæ, nigro maculatæ.

Callimorpha Virguncula, *Kirby, Fauna Bor. Amer.* iv. 304, 2, pl. 4, f. 6.

Canada.

a. United States. Presented by E. Doubleday, Esq.

26. ARCTIA NAIS.

Albida; thorax maculis duabus anticis vittisque tribus nigris; abdomen vitta lata nigro; alæ anticæ nigræ, vittis tribus, 2a furcata, fasciisque obliquis subapicalibus albidis; posticæ flavescens aut rufæ, plus minusve nigro variæ.

Phalæna (Noctua) Nais, *Drury, Ins.* i. 15, pl. 7, f. 3. *Append.* i. 2.

Arctia Nais, *Hübner. Zeit.* f. 599, 60. *Verz. Schmett.* 183, 1884.

Spilosoma Nais, *Westw. Ed. Drury*, i. 15, pl. 7, f. 3.

Var. β, male. Fore stripe of the fore wings not joining the costa.

Var. γ, male. Inner border of the hind wings reddish.

Var. δ, male. Hind wings almost spotless.

Var. ε, male. Fore wings with no pale oblique bands towards the tips.

Var. ζ, fem. like *var. ε.* Hind wings red, with broad blackish borders. Abdomen wholly brown, except on each side above towards the base.

Var. η, fem. Fore wings with testaceous veins; fore stripe and part of the middle stripe almost wanting.

a—e. United States. Presented by E. Doubleday, Esq.

f. United States. From Mr. Milne's collection.

g. Massachusetts. From Prof. Sheppard's collection.

27. ARCTIA PHYLLIRA.

Alæ anticæ nigræ lineis albidis apicalibus, literam B referentibus; posticæ sanguineæ maculis nigris.

Phalæna (Bombyx) Phyllira, *Drury, Ins.* i. 15, pl. 7, f. 2. *Append.* v. 2. *Oliv. Enc. Méth.* v. 94, 236. *Abbot and Smith, Nat. Hist. Lep. Ins. Georg.* ii. 127, pl. 64.

Callimorpha Phyllira, *Westw. Drury*, i. 15, pl. 7, f. 2.

Euplagia Phyllira, *Hübner. Verz. Schmett.* 180, 1861.

a. United States. From Mr. Milne's collection.

b—d. ———?

28. ARCTIA PLACENTIA.

Nigro-fusca; alæ anticæ gutta una aut maculis tribus pallide testaceis; posticæ rubræ, margine maculisque nonnullis submarginalibus nigro-fuscis; abdomen supra rubrum maculis dorsalibus apiceque nigro-fuscis.

Phalæna Placentia, *Abbot and Smith, Nat. Hist. Lep. Ins. Georgia*, ii. 129, pl. 65.

Heraclia Placentia, *Hübner. Verz. Schmett.* 180, 1857.

Var. α. Fore wings with the outer fringe partly pale testaceous, and with several spots and dots of the same colour in the disk.

Var. β. Fore wings with the outer fringe wholly blackish brown, unspotted, except two very minute pale testaceous dots.

a, b. North America. From Mr. Milne's collection.

29. ARCTIA VIRGINALIS.

Abdomen supra fulvum, cingulis nigris, subtus nigrum; alæ anticæ nigræ maculis circiter viginti flavido-albis, posticæ fulvæ, fasciis nigris.

Chelonia virginalis, *Boisd. Ann. Soc. Ent. Fr. 2me Sér. x. 321, 70.*
California.

30. ARCTIA ISABELLA.

Alæ nigro punctatæ; anticæ fulvæ; posticæ roseæ; antennæ flavæ.
Phalæna Isabella, *Abbot and Smith, Nat. Hist. Lep. Ins. Georgia,*
ii. 131, pl. 68.

Estigmene Isabella, *Hübner. Verz. Schmett. 184, 1896.*
Georgia.

31. ARCTIA GELIDA.

Nigra; thorax flavo bivittatus; abdominis latera flava, nigro maculata; alæ anticæ flavescens, maculis angulosis nigris; posticæ subcinereæ.

Euprepia gelida, *Möschler, Ent. Zeit. Stett. ix. 17, 3, 174.*
Labrador.

32. ARCTIA HYPERBOREA.

Mas. Castaneo-fusca; alæ anticæ macula costali vittaque postica interrupta isabellinis; posticæ fascia fusco unimaculata margineque ochraceis.

Eyprepia hyperboreus, *Curtis, Append. Ross. Narr. 2nd Voy. lxxi. 17.*

Arctic America.

South America.

- | | | | | |
|-------------------------------------|---|---|---|-----------------------|
| A. Alæ anticæ fasciis nigro-fuscis. | - | - | - | Zerah, <i>Cram.</i> |
| B. Alæ anticæ testaceo bistrigatæ. | - | - | - | fervida, <i>Walk.</i> |
| C. Alæ anticæ plaga discali rosea. | - | - | - | Amasis, <i>Cram.</i> |

33. ARCTIA? ZERAH.

Fusca; proboscis brevis; abdomen luteum, fasciis nigris; alæ anticæ fasciis quinque macularibus nigro-fuscis, lituraque discali nigricante; posticæ pallide luteæ, venis rufescentibus, fasciis duabus fuscis, una submarginali maculari margineque nigris.

Phalæna Zerah, *Cram. Pap. Exot.* iv. 227, pl. 397, f. G.

Rhyparia Zerah, *Hübner. Verz. Schmett.* 183, 1879.

Surinam.

34. ARCTIA FERVIDA.

Nigro-fusca; abdominis segmenta rufo fasciata; alæ anticæ testaceo bistrigatæ, albo ciliatæ, subtus rufæ, fusco marginatæ; posticæ læte rufæ, fusco marginatæ.

This species differs from the typical form of *Arctia*, but has some resemblance to *A. Placentia*.

Male. Head and thorax thickly clothed with rather long hairs. Proboscis short. Palpi hairy, porrect; third joint conical, small. Antennæ minutely pectinated. Abdomen with short hairs, extending a little beyond the hind wings. Fore wings nearly triangular, almost straight along the costa; outer border very slightly oblique; hind angle rounded; first, second and third inferior veins very near together at the base; fourth thrice further from the third than the third from the first. Hind wings full two-thirds of the length of the fore wings. Legs rather stout; hind tibiæ armed with two medial and two apical spurs of moderate length.

Blackish brown. Abdominal segments with bright red dorsal bands. Fore wings with a white fringe along the outer border; two pale testaceous streaks; one extending in the disk from the base to half the length; the other short, oblique, at two-thirds of the length, extending from near the fore border into the disk; under side red, with brown borders. Hind wings bright red, with very broad blackish brown borders, which in their narrowest part are accompanied by a slender curved brown band; under side like the upper side, but without the band. Length of the body 6 lines; of the wings 16 lines.

a. Guatemala. From M. Sallé's collection.

35. ARCTIA? AMASIS.

Albida; thorax punctis duobus lateralibus nigris vittisque duabus obliquis fuscis; abdomen nigrum, fasciis coccineis, apice luteum; alæ anticæ plaga discali rosea, fasciis duabus angulatis unaque undulosa, litura discali guttaque postica fuscis; posticæ luteæ, maculis quatuor submarginalibus unaque discali nigris.

Phalæna Amasis, *Cram. Pap. Exot.* iii. 23, pl. 206, f. B.
Rhodogastria Amasis, *Hübner. Verz. Schmett.* 172, 1776.

Surinam.

Allied to *Spilosoma*.

Asia.

- A. Alæ anticæ purpureo-cinereoque variæ. - Horsfieldii, *Saund.*
B. Alæ anticæ cervino-fuscoque variæ. - - strigatula, *Walk.*
C. Alæ anticæ albo-fuscoque variæ.
A. Alæ posticæ nigro-fuscæ, flavo bifasciatæ. - imbuta, *Walk.*
B. Alæ posticæ albæ, fusco variæ. - - - divisa, *Walk.*
C. Alæ posticæ flavæ, nigro bifasciatæ. - - Bajularia, *Cram.*
D. Alæ posticæ sublimpidæ, marginibus nigro-fuscis.
strigosa, *Walk.*

The Asiatic species differ from the typical groups, and appear to connect *Arctia* with *Spilosoma*.

36. ARCTIA HORSFIELDII.

Alæ anticæ purpureo subcinereæ, strigis plurimis abbreviatis obsoletis undatis obscure cinereis margine postico parallelis, lineaque distinctiore basali angulata obscure cinerea, maculaque trans medium elongata reniformi discali; alarum posticarum color fusco aurantiacus in purpureo-cinereum mutatus, macula discali radiisque obscure cinereis.

Arctia Horsfieldii, *Saunders, Trans. Ent. Soc. New Series*, i. 162, pl. 12, f. 1, 2. *Zool.* ix. 3070.

Java.

Larva feeds on the *Gossypium herbaceum*, *Linn.*

37. ARCTIA STRIGATULA.

Cervina; alæ anticæ fusco guttatæ; posticæ rufæ fascia fusca; pedes fusci, femoribus supra rufis. Mas.—Alæ anticæ fascia obliqua subapicali fusca.

Fawn colour. Hind wings pale red. Abdomen red, with three stripes of black spots. Legs mostly brown; femora red above. *Male*.—Antennæ rather deeply pectinated. Fore wings with several brown dots, and towards each tip with an interrupted oblique brown streak; under side streaked with pale red, and with fewer and larger

brown marks. Hind wings with a brown discal spot, and with an almost entire brown submarginal band, which is interrupted on the under side. *Fem.*—Antennæ very minutely pectinated. Fore wings with fewer brown dots and without the streak, wholly pale red beneath. Hind wings with a much interrupted band. Length of the body 6—8 lines; of the wings 16—20 lines.

a, b. Java. From the East India Company's collection.

38. ARCTIA IMBUTA.

Obscure fusca; thorax albido trivittatus; abdomen supra coccineum, vittis tribus macularibus nigris, subtus e maculis testaceis bivittatum; alæ anticæ fasciis tribus macularibus diffusis albis, posticæ testaceo bivittatæ.

Dark brown. Head white above and about the eyes. Proboscis testaceous. Antennæ black. Thorax with three whitish stripes, the middle one in front and very short. Abdomen crimson above, with three rows of black spots; under side with two rows of testaceous spots. Coxæ and femora with red stripes. Fore wings with several white marks of various size and shape, mostly arranged in three very irregular and imperfect bands. Hind wings with two testaceous bands, the outer one marginal, the inner one more or less interrupted. Length of the body 7—7½ lines; of the wings 22—24 lines.

a. Himalaya Mountains. From Mr. Leadbeater's collection.

b. North India. Presented by Mrs. Manger.

39. ARCTIA DIVISA.

Albida; thorax guttis duabus anticis vittisque tribus nigris; abdomen luteum, vittis tribus macularibus nigris; alæ anticæ fasciis quatuor interruptis nigro-fuscis; posticæ macula discali fasciæque submarginali fuscis.

White, slightly tinged with cream colour. Head black on each side in front. Proboscis testaceous. Palpi black, luteous towards the base. Antennæ black. Thorax with two black dots in front, and with three black stripes which are shortened in front. Abdomen luteous, with three rows of black spots; under side paler, with two rows of black spots. Legs black, white beneath; femora above and coxæ red. Fore wings with four oblique irregular and imperfect blackish brown bands, which are interrupted by the whitish veins; first and second bands connected in the middle. Hind

wings with a large brown discal spot, and with an irregular brown submarginal band.

Var. β, fem. Thorax with two large black spots in front. Abdomen reddish, with an entire black dorsal stripe. Dark parts of the wings occupying most of the surface. Length of the body 6—8 lines; of the wings 18—22 lines.

a. Himalaya Mountains. Presented by the Entomological Club.

b, c. North India. From Mr. Stevens' collection.

40. ARCTIA? BAJULARIA.

Fusca; abdomen flavum; alæ anticæ maculis duabus fasciæque abbreviata submarginali albis; posticæ flavæ, fasciis duabus nigris, exteriore maculari.

Phalæna Bajularia, Clerck, Icon. pl. 54, f. 6, 7. Cram. Pap. Exot. ii. 115, pl. 172, f. c.

Amboina.

41. ARCTIA STRIGOSA.

Mas. Nigro-fusca; thorax ocellis duobus anticis connexis vittisque quatuor albo-rufis; abdomen supra rufum, e maculis nigris trivittatum, subtus album fasciis fuscis; alæ anticæ albæ fusco strigatæ, posticæ sublimpidæ, marginibus cinereo-fuscis.

Male. Blackish brown. Head red behind and beneath, bordered with white about the eyes. Proboscis tawny. Palpi white beneath. Antennæ white above. Prothorax with two reddish white connected ringlets; mesothorax with a mark on each shoulder and four stripes of the same colour. Abdomen red above, with three rows of black spots, those in the middle row very small; under side white, with short brown bands, and on each side a row of blackish brown spots. Legs brown, with white stripes; coxæ and femora with red stripes. Fore wings white, with numerous brown streaks, which are most prevalent towards the tips; a reddish tinge at the base. Hind wings nearly limpid, with grayish brown borders and veins. Length of the body 5—8 lines; of the wings 16—22 lines.

a, b. ———? Presented by E. Doubleday, Esq.

Australia.

The single Australian species is allied to the European *Arctia*, and has most resemblance to *A. maculosa* and *A. Casta*.

42. ARCTIA FUSCINULA.

Cervina; palpi antennæque nigra; thorax nigro trivittatus; pedes fuscis, coxis femoribusque rufis; abdomen rufum, vittis tribus macularibus nigris; alæ anticæ vitta una fasciisque duabus macularibus flavo-albis; posticæ pallide rufæ, macula discali fasciæque marginali nigro-fuscis.

Fawn colour. Palpi and antennæ black. Thorax with three black stripes. Abdomen red, with three stripes of black spots, the middle row forming short bands. Legs brown; coxæ and femora mostly red. Fore wings blackish brown, with a yellowish white stripe, which proceeds obliquely from the base to three-fourths of the length of the costa, and is more or less interrupted, and with two oblique interrupted more or less macular yellowish white bands, one beyond the middle, the other marginal. Hind wings pale red, with a blackish brown discal spot and a broad blackish brown marginal band. Length of the body 6—7 lines; of the wings 14—16 lines.

a, b. Sydney. Presented by E. Doubleday, Esq.

c. New Holland. Presented by J. Hunter, Esq.

d. New Holland. Presented by Major-General Hardwicke.

Genus 5. PERICALLIA.

Corpus robustum, lineare, cylindricum. Proboscis brevis. Palpi breves, validi, porrecti, pilosi; articulus 2us 1o multo longior, 3us minimus. Antennæ corporis dimidio non longiores. Abdomen longum, alas posticas paullo superans. Alæ longiusculæ. Pedes validi; femora hirta; femora tibiæque antica æqualia; tibiæ posticæ calcaribus quatuor parvis. *Mas.*—Antennæ subserratae, subsetosæ. Abdominis forceps analis robusta.

Phalæna Bombyx, p., *Linn.*; *Esp.*; *Gmel.*; *Scop.*

Bombyx, p., *Fabr.*; *Illig.*; *Borkh.*; *Hübner.*

Arctia, p., *Schr.*; *Steph.*

Pericallia, *Hübner. Verz. Schmett.* 182.

Eyprepia, p., *Ochs.*; *Meig.*

Body stout, linear, cylindrical. Proboscis short. Palpi short, stout, porrect, hairy; second joint much longer than the first; third

very small. Antennæ hardly half the length of the body. Abdomen long, extending a little beyond the hind wings. Wings rather long. Fore wings with the costa almost straight; second inferior vein as far from the first as from the third; fourth about ten times further from the third than the third is from the second. Legs stout; femora hairy; fore femora and fore tibiæ of equal length; hind tibiæ with four rather small spurs. *Male*.—Antennæ minutely serrated and setose beneath. Abdomen with stout anal forceps.

1. PERICALLIA MATRONULA.

Fusca; corpus purpureum, flavo-nigroque maculatum; alæ anticæ maculis præsertim costalibus sulphureis; posticæ aurantiacæ nigro maculatæ.

Noctua matronula, Linn. *Syst. Nat.* i. 2, 835, 92. *Turt. Syst. Nat.* iii. 222. *Esp. Schmett.* iv. 44, pl. 84. *Noct.* 5, f. 1—5.

Phalæna matronula, Gmel. *ed. Syst. Nat.* i. 5, 2437, 92.

———, Merian, *Ins. Eur.* 58. *Röes. Ins. Bel.* iii. 235, pl. 39, f. 1, 2; iv. 36, pl. 4, f. 4. *Ernst, Pap. d'Eur.* iv. 133, pl. 148, f. 194; pl. 149, f. 194. *Suppl.* pl. 3, f. 194. *Freyer, Beitr.* pl. 44.

Bombyx matronula, Fabr. *Mant. Ins.* ii. 128, 167; *Ent. Syst.* iii. 1, 468, 191. *Oliv. Enc. Méth.* v. 89, 22, 1. *Wien. Verz.* 53, Fam. E. 5. *Illig. N. Ausg. dess.* i. 82, 5. *Borkh. Eur. Schmett.* iii. 185, 54. *Fuessl. Schweiz. Ins.* 37, 694. *V. Müller, Faun. Siles.* iii. 1, H. *Schr. Faun. Boic.* ii. 1, 259, 1434. *Lang. Verz.* ii. 90, 695—700. *Schwarz, Raup.* 393, 577. *Petagna. Treits. Hulfsb. Schmett.* 223, 100.

Arctia matronula, Schr. *Faun. Boic.* ii. 152, 5. *Latr. Gen. Crust. et Ins.* *Steph. Ill. Brit. Ent. Haust.* ii. 70, 2. *Wood, Ind. Ent.* pl. 54, f. 38.

Bombyx matrona, Hübn. *Bomb.* 136, 10 (fæm.), pl. 32, f. 138 (mas), pl. 55, f. 239. *Larv. Lep.* iii. *Bomb.* ii. *Veræ, K. d.* f. 1, a—d.

Phalæna Idriensis, Scop. *Ent. Carn.* 113, 121.

Pericallia matrona, Hübn. *Verz. Schmett.* 182, 1872.

Eyprepia matronula, Ochs. *Schmett. Eur.* iii. 327, 14; iv. 60, 15. *Meig. Syst. Besch. Eur. Schmett.* iii. 39, 1, pl. 86, f. 1.

Callimorpha matronula, Herr.-Schæff. *Suppl.* 150, 41, 1. *Speyer, Ent. Zeit. Stett.* xiii. 285, 7.

Chelonia matrona, God. *Pap. de France*, iv. pl. 34, f. 5.

Chelonia matronula, Eversm. *Faun. Lep. Volg. Ural.* 163, 9.

Euprepia matronula, Döring, *Ent. Zeit. Stett.* ix. 304, 11.

a—c. Europe.

Genus 6. DARITIS.

Corpus robustum, sublineare, subcylindricum. Proboscis brevis. Palpi porrecti, longiusculi, sat longi, *maris* pilosiores; articulus 2us 3o fere duplo longior. Abdomen alas posticas non superans. Pedes validi; tibiæ posticæ calcaribus quatuor parvis. *Mas.*—Antennæ mediocriter pectinatæ. Alæ posticæ e maxima parte hyalinæ. *Fœm.*—Antennæ subserratæ.

Euprepia, p., *Klug.*

Body stout, nearly linear and cylindrical. Proboscis short. Palpi porrect, rather long, more hairy in the male than in the female; third joint more than half the length of the second in the female, rather shorter in the male. Antennæ much more than half the length of the body, moderately pectinated in the male, minutely serrated in the female. Abdomen not extending beyond the hind wings. Four wings with the costa almost straight; first and second inferior almost contiguous at the base; fourth about thrice further from the third than the third is from the second. Hind wings mostly hyaline in the male. Legs stout; hind tibiæ with four rather small spurs.

1. DARITIS THETIS.

Mas. et fœm. *Obscure fusca; antennæ nigræ; thorax utrinque macula postice attenuata alba-flavo marginata; abdomen rufum, nigro trivittatum; coxæ flavo maculatæ; femora flavo vittata; alæ anticæ gutta basali rufa, macula antica alba, vittaque discali alba apicem versus triramosa.* *Mas.*—*Alæ posticæ limpidæ, margine, ochraceo, ocellis cyaneis nigro marginatis.* *Fœm.*—*Alæ posticæ luteæ, margine ochraceo, ocellis cyaneis nigro marginatis.*

Euprepia Thetis, *Klug, Neure Schmett.* 6, 4, f. 1, 2.

a. Mexico. Presented by Miss Burrell.

b. Mexico. From M. Hartweg's collection.

2. DARITIS MARGINALIS.

Obscure fusca; thorax fascia antica interrupta flava; abdomen rufum, basi vittisque tribus fuscis, subtus flavum; alæ anticæ fascia lata antice furcata maculaque antica contigua flavis, strigisque basi rufis; posticæ luteæ fasciis duabus nigris, una submarginali, altera marginali cyaneoque maculata.

Dark brown. Thorax in front with an interrupted pale yellow band. Pectus with a few white hairs at the base of the wings. Abdomen red, dark brown at the base, with three dark brown stripes, the lateral pair interspersed with yellow hairs; under side yellow. Fore wings beyond the middle with a broad yellow band, which is forked in front, and between the forks there is a somewhat rounded yellow spot; base with red streaks, which are most apparent beneath where there is a tuft of testaceous hairs very near the base. Hind wings luteous, with black veins and with two black bands, the first slender and submarginal, the second broader and marginal, and containing a row of blue spots; towards the disk there is a black streak, and between it and the first black band on the under side are three pale yellow spots. Legs partly clothed with yellow hairs. Length of the body 11 lines; of the wings 34 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 7. ALOPE.

Corpus mediocriter latum. Proboscis capitis latitudine paullo longius. Palpi breviusculi; articulus 2us 1o æqualis; 3us minimus. Abdomen alas posticas non superans. Pedes graciles; tibiæ posticæ calcaribus quatuor longis. Alæ latæ. *Mas.*—Antennæ subpectinatae. *Fæm.*—Antennæ simplices.

Body moderately broad. Proboscis a little longer than the breadth of the head. Palpi rather short; second joint as long as the first; third very small. Abdomen extending as far as the hind wings. Legs slender; hind tibiæ with four long spurs. Wings broad. Fore wings with the second inferior vein rather nearer to the first than to the third; third more than six times further from the fourth than from the second. Inferior veins of the hind wings like those of the fore wings. *Male.*—Antennæ slightly pectinated. *Fem.*—Antennæ simple. Allied to *Deiopeia*.

- | | | |
|------------------------------|---------|--------------------------|
| A. Alæ anticæ ocellatæ. | - - - - | ocellifera, <i>Walk.</i> |
| B. Alæ anticæ non ocellatæ. | - - - - | |
| A. Thorax totus fuscus. | - - - - | |
| A. Alæ posticæ non fasciatæ. | - - - - | semicineta, <i>Walk.</i> |
| B. Alæ posticæ fasciatæ. | - - - - | Mopsa, <i>Drury.</i> |
| B. Thorax antice coccineus. | - - - - | Sangarida, <i>Cram.</i> |

1. ALOPE OCELLIFERA.

Fusca; palpi subtus lutei; thorax et alæ anticæ maculis plurimis nigro-fuscis testaceo marginatis; abdomen rufum aut flavum, trifariam nigro maculatum; alæ posticæ rufæ aut flavæ, fasciis macularibus nigro-fuscis.

Brown. Palpi luteous beneath. Thorax and fore wings with numerous blackish brown spots, which have testaceous borders. Abdomen red or yellow, with three rows of black spots. Coxæ partly luteous. Hind wings red or yellow, with irregular macular blackish brown bands. The spots on the thorax vary in number, and are in some cases wholly wanting. The spots on the fore wings form about six irregular oblique bands of alternate large and small spots, and vary much in size and form. The hind wings have three bands; the first and second are very rarely entire, generally macular, and in some cases nearly or wholly wanting. The third band is broader, and more often entire. Length of the body 5—10 lines; of the wings 14—28 lines.

a—d. North India. From Mr. L. James' collection.

e. North India. From Mr. Stevens' collection.

f, g. Silhet. From the Rev. J. Stainforth's collection.

h, i. Ceylon. Presented by R. Templeton, Esq.

j—l. Canara, Malabar Coast. Presented by S. N. Ward, Esq.

2. ALOPE SEMICINCTA.

Fœm. Nigro-fusca; caput supra, thoracisque latera testacea; abdomen rufum vitta maculari nigra, subtus nigrum fasciis rufis; alæ anticæ macula fasciæque maculari albis; posticæ rufæ, fusco marginatæ.

Fem. Blackish brown. Head testaceous above. Palpi and antennæ black. Thorax testaceous on each side. Abdomen red, with a stripe of black dorsal spots; under side black, with red bands on the borders of the segments. Fringes of the wings with testaceous dots. Fore wings with a white spot a little before the middle, and at one-third of the breadth from the costa, and with a macular oblique white band, which is at two-thirds of the length of the wing, and is more or less interrupted in the middle. Hind wings red, with broad brown borders. Length of the body 8—9 lines; of the wings 22 lines.

a, b. North India. From Mr. L. James' collection.

3. ALOPE ? SANGARIDA.

Obscure fusca; thorax antice coccineus; alæ albo ciliatæ; anticæ fascia albida; posticæ fasciis duabus fasciam brevem atram amplexantibus coccineis.

Phalæna Sangarida, *Cram. Pap. Exot.* iv. 181, 381, f. D.
Ceylon.

4. ALOPE? MOPSA.

Alæ anticæ fuscae, fascia recta subapicali; posticæ sanguineæ, basi, fascia media undata, margineque nigris.

Phalæna (Noctua) *Mopsa*, *Drury, App.* iii. *Ill. Exot. Ins.* iii. 4, pl. 3, f. 3.

Callimorpha? *Mopsa*, *Westw. Ed. Drury*, iii. 4, pl. 3, f. 3.

Madras.

Genus 8. TINOLIUS.

Corpus cylindricum, gracile. Proboscis capitis latitudine multo longior. Palpi ascendentes, mediocriter longi; articulus 2us 1o multo longior; 3us parvus, conicus. Pedes longiusculi; tibiæ anticæ subtus fasciculatæ, posticæ calcaribus quatuor longis. Alæ latæ. *Mas.*—Antennæ pectinatæ. Abdomen alas posticas vix superans. *Fæm.*—Antennæ simplices. Abdomen brevius.

Body cylindrical, slender. Proboscis much longer than the breadth of the head. Palpi ascending, moderately long, clothed with very short hairs; second joint much longer than the first; third minute, conical. Legs rather long; fore tibiæ fasciculate beneath; hind tibiæ with four long spurs. Wings broad. Fore wings with the second inferior vein nearer to the first at the base than the third is to the second; fourth about four times further from the third than the third is from the second. *Male.*—Antennæ pectinated, about half the length of the body; branches moderately broad. Abdomen hardly extending beyond the hind wings. *Fem.*—Antennæ simple, minutely setose beneath. Abdomen not extending so far as the hind wings.

1. TINOLIUS EBURNEIGUTTA.

Roseus; thorax nigro sexmaculatus; abdomen fasciis interruptis nigris; pedes nigro varii; alæ anticæ rufo-cervinæ, guttis niveis, posticæ marginibus latis rufo-cervinis.

Rose colour. Proboscis piceous. Antennæ brown, rosy at the base. Thorax with three black spots on each side. Abdomen with an interrupted black band on each segment, and with red crests on the segments towards the base, the basal tuft black on each side. Knees and tibiæ with black spots; tarsi testaceous, with black tips. Fore wings reddish fawn colour, rosy along the costa, with six bright

white dots; first at the base, very small; second and third on the inner border; fourth near the costa before one-third of the length; sixth close behind the fifth, which is near the costa before two-thirds of the length, and varies much in size. Hind wings rosy, with broad reddish fawn-colour borders. Length of the body 6—9 lines; of the wings 20—24 lines.

a, b. Ceylon. Presented by R. Templeton, Esq.

c. Malabar Coast. Presented by S. N. Ward, Esq.

d, e. East Indies. From Archdeacon Clark's collection.

f. Silhet. From the Rev. J. Stainforth's collection.

Genus 9. AMMALO.

Mas. Corpus cylindricum, longiusculum. Proboscis corporis dimidio brevior. Palpi ascendentes, longiusculi; articulus 2us arcuatus, 1o multo longior; 3us conicus, minimus. Antennæ corporis dimidio breviores, vix pectinatæ. Abdomen alas paullo superans. Sexualia parva, occulta. Pedes mediocriter longi; tibiæ posticæ calcaribus quatuor parvis. Alæ longæ, mediocriter latæ, subacuminatæ; anticæ costa subconvexa.

Male. Body cylindrical, rather long. Proboscis less than half the length of the body. Palpi ascending, rather long; second joint curved, very much longer than the first; third conical, very minute. Antennæ more than half the length of the body, very minutely pectinated. Abdomen extending a little beyond the hind wings. Sexualia small, concealed. Legs moderately long; hind tibiæ with four small spurs. Wings long, moderately broad, slightly acuminate. Fore wings slightly convex in front; discal fold distinct; second inferior vein very near the first at the base, a little further from the second; third more than six times further from the fourth than from the second. Hind wings with the inferior veins very much like those of the fore wings in structure.

1. AMMALO FERVIDUS.

Luteus; pectus rufescens; abdomen supra luteo-testaceum, fasciis fuscis; pedes pallide fusci, femoribus tibiisque subtus rufescentibus; alæ anticæ luteo-testaceæ, maculis luteis cinereo marginatis bifasciatæ; posticæ rufescentes. Var. Alæ anticæ fusco subnebulosæ.

Luteous. Proboscis tawny. Palpi reddish on the outer side. Antennæ brown, testaceous above. Pectus reddish. Abdomen above lutescent testaceous, with brown bands. Legs pale brown; femora and tibiæ reddish beneath. Fore wings lutescent testaceous,

luteous at the base, and with several rather large indistinct grayish bordered spots, which form two oblique irregular and incomplete bands; under side and hind wings more reddish. Length of the body 9—10 lines; of the wings 28—32 lines.

Var. β. Fore wings almost wholly but indistinctly mottled with pale brown.

a. ———? From Mr. Milne's collection.

b, c. ———?

2. AMMALO HELOPS.

Ochraceus; abdomen fasciis nigris; alæ anticæ fuscæ, maculis discalibus anticis luteis, basi plagisque duabus maximis exterioribus rufescentibus; posticæ fascia lata subtestacea.

Phalæna Bombyx Helops, *Cram. Pap. Exot.* i. 113, pl. 72, f. C.

Pelochyta Helops, *Hübner. Verz. Schmett.* 172, 1773.

Surinam.

Genus 10. NEMEOPHILA.

Palpi brevissimi; articuli subglobosi, 1us 2o paullo longior, 3us paullo minor. Proboscis distincta, brevissima. Antennæ maris subbipectinatae, fœminæ serratae et ciliatae. Corpus gracile. Thorax non cristatus. Abdomen annulatum. Alæ opacæ, dense squamosæ. Pedes sat breves; tibiæ anticæ intus spina armatae, posticæ apice calcaratae.

Nemeophila, *Steph. Ill. Brit. Ent. Haust.* ii. 72. *Westw. & Humph.*

Phalæna Bombyx, p., *Linn. Berk.; Don.; Stew.; Turt.*

Bombyx, p., *Fabr.; Wien. Verz.; Borkh.; Haw.*

Phalæna, p., *Scop.*

Arctia, p., *Schr.*

Phalæna, p., *Scop.; Wilkes.*

Parasemia, *Hübner. Verz. Schmett.* 181; *Steph. Cat. Brit. Lep.* 54.

1. NEMEOPHILA PLANTAGINIS.

Prothorax, scapulæ, abdominis margines et alæ posticæ in mare flava aut alba, in fœmina coccinea; alæ anticæ nigrae rivulis flavis, ciliis flavo variegatis; posticæ margine maculisque nigris.

Phalæna Bombyx Plantaginis, Linn. *Syst. Nat.* ii. 820, 42; *Faun. Suec.* 301, 1132; *It. Goth.* 273. Gmel. ed. *Syst. Nat.* i. 5, 2421, 42. Berk. *Syn.* i. 135. Don. *Hist. Nat. Brit. Ins.* iv. 69, pl. 134. Stew. *El. Nat. Hist.* ii. 150. Turt. *Syst. Nat.* iii. 221.

———, Roes. *Ins.* iv. pl. 24. Geoffr. *Ins.* ii. 109, 10. Schæff. *Icon.* pl. 92, f. 5—7.

Phalæna Plantaginis, Wilkes, *Pap.* 24, pl. 50.

Bombyx Plantaginis, Fabr. *Sp. Ins.* ii. 196, 115; *Mant. Ins.* ii. 127, 163; *Ent. Syst.* iii. 1, 466, 186. Wien. *Verz.* 53, E. 4. Oliv. *Enc. Méth.* v. 88, 217. Borkh. *Schmett.* iii. 178, 52; *Rhein. Mag.* i. 338, 172. Esp. *Schmett.* iii. pl. 36. Illiger, *N. Auss. dess.* i. 81, 4. *Mag.* ii. 47, 4. Schæff. *Icon. Nomencl.* Panz. 104. Var. *Hospita*, 135, pl. 136, f. 1, 2. Panz. *Faun. Germ.* 16, 22. Fuessl. *Schweiz. Ins.* 35, 658. *N. Mag.* ii. 375. Müll. *Faun. Fridr.* 41, 372. Zool. *Dan.* 118, 1361. Schr. *Faun. Boic.* ii. 1, 259, 1433. Vieweg, *Tab. Verz.* i. 58, 56. Lang. *Verz.* ii. 89, 688—692; 90, 693, 694. Brahm. *Ins. Kal.* 244, 139. Schwarz, *Raup.* 4, 27, 221, 377, 644, 754. Petagna. *Haw. Lep. Brit.* 94. Hübn. *Bomb.* pl. 29, f. 126—128; pl. 55, f. 238; *Larv. Lep.* iii. *Bomb.* ii. Veræ, *K. a.*, f. a—d. Treits. *Hulfsb. Schmett.* 220, 95.

Phalæna apicola, Scop. *Ent. Carn.* 205, 507.

Bombyx hospita, Wien. *Verz. App.* 310. V. Müll. *Faun. Siles.* iii. 1. Borkh. *Schmett.* iii. 470.

Arctia Plantaginis, Schr. *Faun. Boic.* ii. 2, 152, 4. Latr. *Gen. Crust. et Ins.*

Eyprepia Plantaginis, Ochs. *Schmett. Eur.* iv. 312, 7.

Var. β . Steph. Ernst, *Pap.* iv. pl. 147, f. 192, b.

Bombyx hospita, Wien. *Verz.* 310; Borkh. *Eur. Schmett.* iii. 470.

Var. γ . Steph. Ernst, *Pap.* iv. pl. 147, f. 192, a.

Phalæna alpicola? Scop. *Ent. Carn.* 507.

Var. δ . Steph. Ernst, *Pap.* iv. pl. 145, f. 191, f.

Var. ϵ . Steph. Ernst, *Pap.* iv. pl. 146, f. 191, p.

Nemeophila Plantaginis, Steph. *Ill. Brit. Ent. Haust.* ii. 72, 1.

Westw. & Humph. *Moths*, i. 76, pl. 19, f. 14, 15.

Parasemia Plantaginis, Hübn. *Verz. Schmett.* 181, 1870. Steph. *Cat. Brit. Lep.* 54.

Chelonia Plantaginis, God. *Pap. de France*, iv. 320, 98, pl. 23, f. 2—4.

Callimorpha Plantaginis, Meig. *Handb.* 140, 90, pl. 11, f. 3; *Syst. Besch. Eur. Schmett.* iii. 29, 6, pl. 84, f. 3, Speyer, *Ent. Zeit. Stett.* xiii. 286, 9.

Var. *Callimorpha Hospita*, Speyer, *Ent. Zeit. Stett.* xiii. 287.

Var. *Callimorpha matronalis*, *Speyer, Ent. Zeit. Stett.* xiii. 287.

a. England. Presented by H. Doubleday, Esq.

b, c. England.

d—t. England. From Mr. Stephens' collection.

v—x. Europe. From M. Becker's collection.

y. ———?

2. NEMEOPHILA CAUCASICA.

*Atra; prothorax totus et costa rubra; maculae flavae discretae
luciores; alae posticae subangulatae.*

Nemeophila Caucasica, *Ménétries, Catal. Zool. Caucas. Herr.-
Schæff. Samml. Eur. Schmett. Suppl.* ii. Text, 147, 28, 13.

Nemeophila Plantaginis, *Var., Boisd. Gen. et Ind. Méth. Eur. Lep.*
62, 508.

Caucasus.

North America.

A. Alae anticae albo variae.

A. Alae posticae rufae, nigro maculatae. - - *figurata, Drury.*

B. Alae posticae nigro-fuscae, flavo maculatae. *Californiae, Walk.*

B. Alae anticae supra totae nigro-fuscae. - - *petrosa, Walk.*

2. NEMEOPHILA FIGURATA.

*Alae anticae nigrae, fascia longitudinali duabus alteris convergenti-
bus connexa, albis; posticae sanguineae margine maculaque
externa nigris.*

Phalæna (Bombyx) figurata, Drury, Ins. Exot. ii. 22, pl. 12, f. 4.

App. ii. Pal. Beauv. Ins. Afr. et Amer. Lep. pl. 24, f. 4.

Nemeophila figurata, Westw. Drury, ii. 23, pl. 12, f. 4.

Euplagia Ceramica, Hübn. Verz. Schmett. 180, 1862.

Virginia.

3. NEMEOPHILA CALIFORNIÆ.

*Nigro-fusca; thoracis latera albido vittata; alae anticae subtus
flavo bifasciatæ; posticae vitta maculisque flavis.*

Male. Blackish brown. Head whitish beneath. Antennæ black. Thorax with a whitish stripe on each side from the head to the base of the fore wing. Femora with red stripes. Fore wings beneath with two broad yellow bands, the first shortened behind, the second divided in front. Hind wings with two discal yellow spots,

and with a yellow angular submarginal stripe; fringe partly yellow; the yellow part beneath is more diffuse, and occupies most of the surface. *Fem.*—Blackish brown. Head white beneath. Palpi with white stripes on the inner side. Antennæ black. Thorax between the head and the fore wings with two lateral white stripes, which are broader than those of the male, and have a reddish tinge in front. Abdomen with a row of red spots along each side, and with white bands beneath. Fore wings beneath with a yellow disk, which is mostly bordered with red, and is interrupted in the middle by a brown band. Hind wings with a short brown discal stripe, and with brown borders which contain some yellow spots, and on the under side are varied with red. Length of the body 5—6 lines; of the wings 12—14 lines.

a, b. California. From M. De Latre's collection.

4. NEMEOPHILA PETROSA.

Nigro-fusca; thorax luteo bimaculatus; abdominis latera luteo vittata; alæ anticæ vitta basali fasciæque maculæque albis.

Mas.—*Alæ anticæ, albæ vittis duabus marginibusque fuscis.*

Fœm.—*Alæ posticæ vitta undulosa submarginali flava.*

Male. Blackish brown. Palpi mostly clothed with yellow hairs. Thorax with a luteous spot on each side in front. Sides of the abdomen with a white mark on each segment above, and with a luteous one beneath; tip luteous; apical appendages tawny. Legs with white stripes. Fore wings with a white discal stripe, which extends near the hind border to a little beyond half the length; beyond it is an oblique white band, whose inner side is undulating and almost touches the tip of the stripe; near it in the middle of the length of the wing, and towards the fore border, there is a white spot; costa with a luteous streak at the base. Hind wings white, with two brown stripes proceeding from the base to the middle, and with brown borders. *Fem.*—Blackish brown. Palpi clothed with black hairs. Thorax with a luteous spot on each side in front. Abdomen with a luteous stripe on each side. Fore femora with a short luteous streak on each. Fore wings with a short white streak extending in the disk from the base, and beyond the middle with a white band corresponding to that of the male, yellow towards the costa, forked towards the hind border; between it and the tip there is a small curved white mark. Hind wings with a yellow undulating irregular submarginal stripe; costa with a luteous streak at the base. Length of the body 6 lines; of the wings 14 lines.

This species is much more nearly allied than *N. Californiæ* to the typical *N. Plantaginis*.

a, b. Rocky Mountains. Presented by the late Earl of Derby.

Genus 11. PHAOS.

Mas. Corpus sat gracile. Proboscis brevis. Palpi breves, pilosi; articulus 3us minimus. Antennæ pectinatæ, ramis subclavatis, mediocriter longis. Abdomen lineare, alas posticas non superans. Alæ anticæ angustæ, triangulares. Pedes mediocriter validi; tibiæ anticæ apud medium calcaratæ, posticæ quadricaratae.

This genus seems to connect *Nemeophila* with the *Lithosiidæ*.

Male. Body rather slender. Head and thorax clothed with short hairs. Proboscis short. Palpi short, hairy; third joint very small. Antennæ more closely pectinated than in *Nemeophila*; branches subclavate, of moderate length. Abdomen linear, extending nearly as far as the hind wings, with short hairs; sides with small tufts of hairs. Fore wings narrow, triangular, straight along the costa; outer border slightly oblique and convex; hind angle obtuse and rounded; first, second and third inferior veins very near together at the base; fourth full four times further from the third than the third from the first. Hind wings much broader than the fore wings, and about two-thirds of their length. Legs moderately stout; fore tibiæ armed with a long spur in the middle beneath, and with a short spur at the tip above; hind tibiæ with four spurs of moderate length.

1. PHAOS INTERFIXA.

Nigra; thorax cano trivittatus; abdomen rufum, vitta dorsali maculari nigra, subtus flavum, e maculis nigris trivittatum; femora supra rufa; alæ anticæ maculis plurimis testaceis, vittaque basali rufa; posticæ luteæ, vitta lata marginali nigra luteo guttata.

Black. Head clothed with hoary hairs, and on each side between the eyes and on the vertex with black hairs. Thorax with a band in front and with three stripes of hoary hairs. Abdomen red, with a dorsal row of black spots; under side pale yellow, with three rows of black spots. Fore wings full of pale testaceous spots, some of them more or less tinged with luteous, and at the base with a short costal red stripe; the spots are smaller and more numerous

towards the tips of the wings; under side luteous, with a black spot beyond the middle near the costa, and with a broad black apical band, which is intersected by a deeply serrated testaceous band. Hind wings luteous, blackish at the base, with a black subcostal spot, and with a broad black marginal stripe, which contains two or three luteous spots and is submarginal beneath. Legs mostly covered with testaceous tomentum; femora red above. Length of the body 4—5 lines; of the wings 12—14 lines.

a, b. Van Dieman's Land. Presented by R. Butler, Esq.

c, d. Van Dieman's Land. Presented by Morton Allport, Esq.

e—g. Van Dieman's Land. From Mr. A. J. Smith's collection.

Genus 12. PHRAGMATOBIA.

Caput et thorax pilis longis hirta. Palpi breves, vix distincti, pilosissimi; articulus 1us 2i longitudine sed crassior; 3us 2o brevior, ovatus, obtusus. Proboscis subspiralis. Antennæ breves, ciliatæ, *maris* serratæ, *fæminæ* simplices. Thorax crassus. Abdomen maculatum. Tibiæ anticæ inermes, posticæ quadricaratae posticæ vena 5a conspicua. Alæ subdiaphanæ, squamis rarioribus adpersæ.

Phragmatobia, *Steph. Ill. Brit. Ent. Haust.* ii. 73; *Herr.-Schæff.*

Phalæna Bombyx, p., *Linn.*; *Berk.*; *Don.*; *Stew.*; *Turt.*

Phalæna, p., *Wilkes.*

Noctua, p., *Haw.*

Arctia, *Hübner. Verz. Schmett.* 181; *Boisd.*

1. PHRAGMATOBIA FULIGINOSA.

Alæ anticæ rufo-fuliginosæ, puncto gemino nigro; posticæ rubræ, maculis marginulibus nigris; abdomen serie triplici macularum nigrarum.

Phragmatobia fuliginosa, *Steph. Ill. Brit. Ent. Haust.* ii. 14, 1.

Westw. & Humph. Moths, i. 93, pl. 19, f. 1, 2. *Herr.-Schæff.*

Samml. Eur. Schmett. Suppl. ii. 142, 6, 2. *Speyer, Ent. Zeit.*

Stett. xiii. 315, 24.

Phalæna Noctua fuliginosa, *Linn. Syst. Nat.* ii. 836; *Faun. Suec.*

1159. *Scop. Ent. Carn.* 508. *Berk. Syn.* i. 139. *Donov.*

Nat. Hist. Brit. Ins. iii. 21, pl. 80. *Stew. El.* ii. 159. *Turt.*

Syst. Nat. iii. 236.

Phalæna Bombyx fuliginosa, *Gmel. ed. Syst. Nat.* i. 5, 2444, 95.

Bombyx fuliginosa, *Fabr. Sp. Ins.* ii. 206, 154; *Mant. Ins.* ii. 133, 215; *Ent. Syst.* iii. 1, 486, 246. *Oliv. Enc. Méth.* v. 103, 270. *Wien. Verz.* 54, E, 11. *Borkh. Schmett.* iii. 198, 60. *Rhein. Mag.* i. 340, 178. *Esp. Schmett.* iv. 56, pl. 86, f. 1—5. *Hübner. Bomb.* pl. 33, f. 143. *Larv. Lep.* iii. *Bomb.* ii. *Veræ*, K, e, fig. 2. *Illig. N. Ausg. dess.* i. 88, 11. *Schæff. Icon. Nomemcl. Panz.* 53, pl. 37, f. 7, 8. *Panz. Faun. Germ.* 7, 16. *Fuessl. Schweiz. Ins.* 37, 696. *N. Mag.* iii. 2, 144, 12. *Müll. Faun. Fridr.* 43, 381. *Zool. Dan.* 120, 1382. *Vieweg, Tab. Verz.* i. 62, 65. *Rossi, Faun. Etr.* ii. 177, 1104; *Ed. Illig.* 283, 1104. *Lang. Verz.* ii. 92, 716—718. *Brahm, Ins. Kal.* 30, 10; 189, 96. *Schwarz, Raup.* 10, 274, 534, 761. *Treits. Hulfsb. Schmett.* 226, 106.

Phalæna fuliginosa, *Hufnagel, Pl. Berl. Mag.* iii. 2, 206, 4. *Wilkes*, 23, pl. 49.

———, *Rai, Ins.* 228, 13. *Harr. Aur.* pl. 27, f. 1—n.; *Exp.* pl. 8, f. 7. *Röes. Ins.* i. pl. 43. *Uddm. Diss.* 76. *Amiral, Ins.* pl. 30. *Sepp. Neederl. Ins.* ii. pl. 36, f. 1—8. *Ernst, Pap. d'Eur.* iv. 150, pl. 154, f. 200; pl. 155, f. 200.

Noctua fuliginosa, *Haw. Lep. Brit.*

Arctia fuliginosa, *Hübner. Verz. Schmett.* 183, 1880. *Latr. Gen. Crust. et Ins.*

Eyprepia fuliginosa, *Ochs. Schmett.* iii. 346, 24; iv. 61, 25.

Chelonia fuliginosa, *God. Pap. de France*, iv. 351, 109, pl. 36, f. 4.

Callimorpha fuliginosa, *Meig. Handb.* 144, 103; *Syst. Besch. Eur. Schmett.* iii. 42, 7, pl. 85, f. 4.

a—n. England. From Mr. Stephens' collection.

o. England.

p, q. Lapland. Presented by F. Walker, Esq.

r. Nice. From Dr. Leach's collection.

s—u. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

The North American specimens are generally smaller than the European, and have darker hind wings.

2. PHRAGMATOBIA PLACIDA.

Abdominis dorsum purpureum, striga dorsali pectinata, lateribusque nigris; alæ anticæ macula media purpurea.

Phragmatobia placida, *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. *Text*, 142, 6, 2.

Europe.

North America.

- A. Alæ posticæ nigræ. - - - - - vagans, *Boisd.*
 B. Alæ posticæ rufæ. - - - - - assimilans, *Walk.*

3. PHRAGMATOBIA VAGANS.

Murina vel cinereo-lutescens; alæ anticæ immaculatæ; posticæ nigræ, fimbria cinereo-lutescente; omnes subtus cinereæ lunula nigra.

Arctia vagans, Boisd. Ann. Soc. Ent. Fr. 2me Sér. x. 322, 92.

North California.

4. PHRAGMATOBIA ASSIMILANS.

Mas. Rufa; antennæ testaceæ; alæ anticæ nigro biguttatæ, posticæ triguttatæ.

Var. β. Alæ anticæ fere totæ fuscæ, posticæ vitta lata submarginali nigricante.

Male. Red. Antennæ testaceous. Thorax with brown hairs. Wings red; veins darker. Fore wings slightly brown along the costa and elsewhere, indistinctly sprinkled with pale brown, with two blackish dots, one at the base of the anterior inferior veins, the other between the first and the costa. Hind wings brighter red, with three black dots, two in the disk, and one near the hind border towards the inner angle. Length of the body 6 lines; of the wings 16 lines.

Var. β. Fore wings almost wholly brown. Hind wings with a broad blackish submarginal stripe.

a, b. United States. Presented by E. Doubleday, Esq.

Mexico.

5. PHRAGMATOBIA ALBICOSTA.

Nigro-fusca; thorax fascia antica alba; coxæ anticæ rufo vittatæ; alæ anticæ costa alba. Mas.—Abdomen supra fasciis subinterruptis rufis. Fœm.—Abdomen supra rufum guttis dorsalibus nigris.

Male and female. Blackish brown. Proboscis piceous. Antennæ black. Thorax in front with a white band, which is most apparent on each side. Fore coxæ with red stripes. Costa of the fore wings white. *Male.*—Abdomen above with red half interrupted bands;

tip thickly tufted with white hairs. *Female*.—Abdomen above bright red, with black dorsal dots; tips white? Length of the body 6—7 lines; of the wings 18—20 lines.

a, b. Mexico. From M. Hartweg's collection.

Asia.

- A. Alæ anticæ nigro quadrimaculatæ. - - montana, *Guér.*
 B. Alæ anticæ nigro unimaculatæ. - - exclamationis, *Kollar.*

6. PHRAGMATOBIA MONTANA.

Alæ anticæ obscure fuscae et nigro subundatæ; subtus pallido rubræ, margine obscuriores maculis duabus nigris; posticæ livido flavescentes, maculis quatuor nigris; caput et thorax obscure fusca; antennæ pectinatæ; abdomen supra rubrum, in medio fusco lineatum, subtus fuscum punctis lateralibus nigris; pedes fusci, femoribus supra rubris.

Arctia montana, Guér. Voy. Delessert, Hist. Nat. 92, pl. 26, f. 3.

Neelgherry Mountains.

7. PHRAGMATOBIA EXCLAMATIONIS.

Fuliginoso rubens; thorax et abdomen pilis longioribus et densioribus; alæ anticæ medio signo nigro.

Euprepia exclamationis, Kollar, Kaschmir von Hugel, 469, 9.

Himalaya Mountains.

Genus 13. APANTESIS.

Fœm. Corpus fusiforme. Caput parvum. Proboscis brevis. Palpi pilosi, porrecti; articulus 3us conicus, parvus. Antennæ subpectinatæ. Thorax pilis adpressis. Abdomen alas posticas triente superans. Pedes validiusculi; tibiæ posticæ calcaribus quatuor mediocriter longis. Alæ anticæ angustæ, subfusiformes, costa subconvexa.

Fem. Body fusiform, clothed with close smooth hairs. Head small. Head and thorax clothed with short hairs, lying close and smooth. Proboscis short. Palpi hairy, porrect; third joint conical, small. Antennæ minutely pectinated. Abdomen with very short hairs, extending to one-third of its length beyond the hind wings.

Fore wings narrow, subfusiform, slightly convex along the costa; outer border slightly oblique and convex; hind angle very obtuse and much rounded; first, second and third inferior veins very near together at the base; fourth thrice further from the third than the third from the first. Hind wings rather broader than the fore wings and hardly two-thirds of the length. Legs moderately stout; hind tibiæ with four spurs of middling length.

1. APANTESIS RADIANS.

Fœm. *Obscure fusca; caput supra luteum; thorax luteo bivittatus; abdomen supra luteo bivittatum, basi testaceum; alæ anticæ marginibus interruptis strigaeque discali testaceis; posticæ basi rufæ.*

Fœm. Dark brown. Head clothed above with luteous hairs. Proboscis testaceous. Antennæ black. Thorax in front luteous with two brown stripes; middle part with two luteous stripes. Abdomen above testaceous towards the base and with two luteous stripes. Fore wings with testaceous borders, excepting the apical third part of the costal margin; a discal testaceous streak, extending from the base along one-fourth of the length of the wing, forked at its tip. Hind wings red towards the base; the outline of the red part very angular. Fore femora with a luteous spot on each. Length of the body 5 lines; of the wings 12 lines.

a. Georgia. From Mr. Milne's collection.

Genus 14. MAZÆRAS.

Mas. Corpus longum, validum, cylindricum. Proboscis corporis dimidio brevior. Palpi ascendentes, longiusculi; articulus 2us arcuatus, 1o multo longior; 3us conicus, minimus. Antennæ mediocriter pectinatae, corporis dimidio non longiores. Abdomen alas posticas longe superans. Pedes validi, longiusculi; tibiæ posticæ calcaribus quatuor longis. Alæ angustæ, sat longæ.

Male. Body long, stout, cylindrical. Proboscis less than half the length of the body. Palpi ascending, rather long; second joint curved, very much longer than the first; third conical, very minute. Antennæ moderately pectinated, hardly half the length of the body. Abdomen extending far beyond the hind wings. Legs stout, rather long; hind tibiæ with four long spurs. Wings rather long and narrow. Fore wings nearly straight in front; discal fold very distinct; first and second inferior veins nearly contiguous at the base; second about six times further from the third than from the first; third further from the fourth than from the second.

1. MAZERAS CONFERTA.

Mas. Saturate rufa ; palpi apice nigri ; antennæ nigræ ; thorax ocello discali maculisque quatuor nigris ; abdomen luteum, e maculis nigris trivittatum ; tibiæ tarsique nigra ; alæ anticæ fuscæ maculis rufis strigisque transversis testaceis.

Male. Deep red. Proboscis tawny. Palpi with black tips. Antennæ black. Thorax with a black ocellus in the disk, and with four black spots, one near the base of each wing. Abdomen luteous, with three dorsal stripes of large black spots. Tibiæ and tarsi black. Fore wings brown above, with two or three red spots at the base, with one in the discal areolet, and with many minute transverse testaceous streaks ; under side reddish, brown in front and towards the tips. Hind wings red ; under side brown in front and towards the tips. Length of the body 11 lines ; of the wings 30 lines.

a. Brazil. Presented by W. W. Saunders, Esq.

Genus 15. GIPPIUS.

Mas. Corpus crassum. Proboscis mediocriter longa. Palpi sat longi, subascendentes ; articulus 2us 1o valde longior ; 3us longiconicus, gracilis. Antennæ serratæ, subsetosæ. Abdomen apice fasciculatum, alas posticas paullo superans. Pedes validi ; tibiæ posticæ calcaribus quatuor longis. Alæ angustæ ; anticæ posticis valde longiores.

Male. Body very stout. Proboscis moderately long. Palpi moderately long, very slightly ascending, extending a little beyond the head, clothed with very short hairs ; second joint very much longer than the first ; third elongate-conical, slender, about one-fourth of the length of the second. Antennæ serrate and minutely setose beneath. Abdomen tufted at the tip. Legs stout ; hind tibiæ with four long spurs. Wings narrow. Fore wings very much longer than the hind wings ; first and second inferior veins contiguous at the base ; third as far from the second as the fourth is from the third. Hind wings extending rather beyond half the length of the abdomen.

1. GIPPIUS SUMPTUOSUS.

Atra; caput, prothorax et pedes coccineo hirta; palpi fulvi, subtus nigri; thorax fascia antica vittisque quatuor luteis; abdomen e guttis luteis bivittatum, fasciis duabus subtus apiceque coccineis; alæ flavo guttatæ, posticæ subtus gutta basali rufa.

Deep black. Head crimson about the eyes and with a triangular crimson spot on the vertex. Palpi tawny, black beneath. Prothorax with crimson hairs. Thorax with a luteous band in front, from whence four luteous stripes proceed hindward, and there have a crimson hue. Abdomen above with two rows of luteous dots; two stripes on the under side and tip crimson. Legs, except the tarsi, thickly clothed with black and crimson hairs. Fore wings with many yellow dots, which occupy the whole breadth for more than one-third of the length, and thence extend along the fore border and along the hind border nearly to the tips. Hind wings with yellow dots along the borders, and with one or two in the disk near the base; under side with a red dot on the hind border near the base. Length of the body 6 lines; of the wings 16 lines.

a. Honduras. Presented by E. Doubleday, Esq.

Genus 16. GLANYCUS.

Fœm. Corpus crassum, breve. Proboscis breviuscula. Palpi sat parvi; articulus 2us 1o multo longior; 3us longiconicus. Antennæ graciles, simplices. Abdomen alas posticas triente superans. Pedes sat validi; tibiæ posteriores subciliatæ; tibiæ posticæ calcaribus minimis apicalibus. Alæ anticæ angustæ, posticis duplo longiores. Alæ posticæ breviusculæ, latiusculæ, costa basi convexa, margine postico undulato.

Fœm. Body thick, short. Proboscis rather short. Palpi rather small; second joint much longer than the first; third elongate-conical. Antennæ slender, simple. Abdomen extending for about one-third of its length beyond the hind wings. Legs rather stout; hinder tibiæ slightly ciliated; hind tibiæ with very minute apical spurs. Fore wings narrow, about twice the length of the hind wings; first and second inferior veins nearly contiguous at the base; third very near the second; fourth remote from the third. Hind wings rather short and broad; fore border convex near the base; hind border undulating.

1. GLANYCUS INSOLITUS.

Nigra; thorax coccineo hirtus; abdomen nigro-cyaneum, fascia antica, vitta dorsali fasciisque quatuor posticis coccineis; alæ anticæ fasciis quatuor coccineis strigaeque obliqua discali hyalina; posticæ maculis guttisque nigris maculaque discali furcata limpida.

Black. Thorax with crimson hairs. Abdomen blackish blue, with a dorsal crimson stripe, with a crimson band in front, and with four crimson bands towards the tip. Fore wings with four irregular crimson bands, the first at the base, joined in the middle to the second, which is joined in front and near the hind border to the third; the third is joined in like manner to the fourth, which is widened in front; along an indentation on the outer side of the third band there is an oblique hyaline streak. Hind wings crimson, with three very large black spots, one at the base, two in the disk, and with some small black spots along the border; a large forked hyaline spot in the disk. Length of the body $5\frac{1}{2}$ lines; of the wings 15 lines.

a. Silhet. Presented by E. Doubleday, Esq.

Genus 17. DIACRISIA.

Palpi porrecti, mediocres, subpilosus; articulus 1us 2o brevior; 3us sat gracilis, cylindricus. Proboscis distincta brevis. Antennæ sat breves, graciles, maris bipectinatae, fœminæ serratae. Alæ opacæ, dense squamosæ. Thorax haud cristatus. Abdomen annulatum.

Phalæna Noctua, p., Linn.

Phalæna Bombyx, p., Linn.; Berk.; Don.; Ssew.; Turt.

Phalæna, p., Scop.

Bombyx, p., Fabr.; Esp.; Borkh.; Illig.; Hübn.; Haw.; Treits.

Arctia, p., Schr.; Latr.; Meig.

Hypercompa, p., Hübn.

Eyprepia, p., Ochs; Curt.

Diacrisia, Hübn. Verz. Schmett. 169; Steph. Cat. Brit. Lep.

Euthemonia, Steph. Ill. Brit. Ent. Haust. ii. 68.

1. DIACRISIA RUSSULA.

Alæ anticæ maris luteæ, limbo sanguineo, lunula fusca; fœminæ fulvæ, venis lunulaque rufis; posticæ aurantiacæ fascia marginali fusca.

- Phalæna vulpinaria*, *Linn. Syst. Nat. ed.* 10, 520, 136.
Mus. Bombyx Sannio, *Linn. Faun. Suec. ed.* 11, 302, 1135.
Müller, Faun. Fridr. 42, 373; *Zool. Dan.* 119, 1389.
Phalæna Sannio, *Scop. Ent. Carn.* 211, 520.
Fæm. Noctua russula, *Linn. Faun. Suec. ed.* 2, 308, 1156. *Clerck*,
Icon. pl. 4, f. 1.
Bombyx russula, *Linn. Syst. Nat. i.* 2, 830, 71. *Gmel. ed. Syst.*
Nat. i. 5, 2436, 71. *Fabr. Sp. Ins. ii.* 194, 111; *Mant. Ins. ii.*
127, 159; *Ent. Syst. iii.* 1, 464, 180. *Oliv. Enc. Méth. v.*
85, 213. *Schæff. Icon. Nomencl. Panz.* 96, pl. 83, f. 4, 5.
Esp. Schmett. iii. 337, pl. 67, f. 2—7. *Berk. Syn. i.* 138.
Don. Nat. Hist. Brit. Ins. vi. 81, pl. 214. *Stew. El. Nat.*
Hist. ii. 156. *Turt. Syst. Nat. iii.* 220. *Borkh. Eur. Schmett.*
iii. 217, 68; *Rhein. Mag. i.* 342, 181. *Fuessl. Schweiz. Ins.*
36, 682; *N. Mag. iii.* 2, 149, 65. *Rossi, Faun. Etr. ii.* 174,
1094; *ed. Illig.* 279, 1094. *Vieweg, Tab. Verz. i.* 61, 64.
Lang, Verz. ii. 93, 719, 720. *Brahm, Ins. Kal.* 445, 312.
Schwarz. Raup. 238, 385. *Hübner. Bomb.* 132, 5, pl. 29,
f. 124, 125. *Larv. Lep. iii.* *Bomb. ii.* *Veræ, K. a,* f. 1, a.
Wien. Verz. 54. *Fam. E.* 13. *Illig. N. Ausg. dess. i.* 89, 13.
Treits. Hulfsb. Schmett. 220, 94.
———, *Rai, Ins.* 228, 75. *Robert, Ic.* pl. 30, f. 1. *Schæff.*
Icon. pl. 83, f. 4, 5. *Geoff. Ins. ii.* 129, 39. *Kleeman, Beitr.*
172, pl. 20, f. 1—8. *Ernst, Pap. d'Eur. iv.* 153, pl. 155, f. 201,
a—i. pl. iv. *Suppl. f.* 201, *K. var.*
Arctia russula, *Schr. Faun. Boic. ii.* 1, 263, 1441; 2, 153, 13.
Latr. Gen. Crust. et Ins. Meig. Handb. 139, 89; *Syst. Besch.*
Eur. Schmett. iii. 31, 9, pl. 85, f. 1.
Eyprepia russula, *Ochs. Schmett. Eur. iii.* 309, 6; iv. 60, 6.
Curt, Brit. Ent. i. pl. 21.
Bombyx sannius, *Haw. Lep. Brit.* 133.
Phalæna quadra, *Harris, Vade Mec.* 15.
Euthemonia Russula, *Steph. Ill. Brit. Ent. Haust. ii.* 68, 1.
Diacrisia Russula, *Hübner. Verz. Schmett. (Phalænæ Veræ Lithosiæ*
Diacrisiæ), 169, 1744. *Steph. Cat. Brit. Lep.* 53.
Nemeophila Russula, *Boisd. Gen. et Ind. Méth. Lép. Eur.* 62, 507.
Chelonia Russula, *God. Pap. de France, iv.* 343, 106, pl. 35, f. 4.
Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. *Text*, 148, 36,
21. *Speyer, Ent. Zeit. Stett. xiii.* 286, 8.

a—m. England. From Mr. Stephens' collection.

n—p. England.

q—t. Europe. From M. Becker's collection.

2. DIACRISIA SUBVARIA.

Fœm. *Flava*; caput, palpi, antennæ et pectus fusca; caput vitta fusca, subtus rufo pilosum; antennæ subpectinatæ; pectus rufo bivittatum; abdomen e maculis nigris trivittatum subtus rufescens; pedes fuscæ, rufo vittati; alæ anticæ guttis tribus subcostalibus nigris, maculisque duabus, una rufa, altera fusca; posticæ rufæ, nigro maculatæ.

Fem. Yellow. Head, palpi, antennæ and pectus brown. Head with a yellow vertical band, clothed beneath, like the palpi, with red hairs. Antennæ minutely pectinated. Pectus with an oblique red stripe on each side. Abdomen with three rows of black spots; under side reddish. Legs brown; femora and tibiæ with red stripes. Fore wings with three black dots near the fore border, one at one-third of the length of the wing, the other two approximate at two-thirds of the length; behind the latter there is a red mark, and adjoining it a pale brown spot, which on the under side is black; fringe of the outer border partly brown; under side mostly red, with two additional brown spots towards the tips. Hind wings red, with some black spots, which are mostly indistinct on the under side. Length of the body 6 lines; of the wings 16 lines.

a. North China. From Mr. Cuming's collection.

The following six genera are aberrant forms of *Arctiidæ*; they are allied to *Spilosoma* and to *Hypercompa*, but have nearly as much affinity to *Dipænæ*, *Encereon*, *Fregella*, and *Rhipha*, four groups of *Euchromia*.

Genus 18. CREATONOTOS.

Mas. et fœm. Corbus robustum. Proboscis capitis latitudine paullo longius. Palpi brevissimi; articulus 3us minimus. Antennæ simplices. Thorax pilis adpressis. Abdomen alas posticas paullo superans. Pedes graciles; tibiæ posticæ calcaribus duobus apicalibus brevissimis. Alæ longiusculæ; anticæ angustæ.

A. Alæ anticæ vittatæ.

A. Alæ anticæ vitta interrupta. - - - interrupta, *Linn.*

B. Alæ anticæ vitta integra. - - - emittens, *Walk.*

B. Alæ anticæ guttatæ. - - - *Vuteria, Cram.*

Cretonotos, *Hübner. Verz. Schmett.* 169.

Phalæna Bombyx, p., *Linn.*; *Gmel.*; *Sulz.*

Bombyx, p., *Fabr.*; *Oliv.*

Male and fem. Body stout. Proboscis a little longer than the breadth of the head. Palpi very short; third joint very small. Antennæ simple. Thorax with the hairs flat and closely applied to the surface. Abdomen extending a little beyond the thorax. Legs slender; hind tibiæ with two very short apical spurs. Wings rather long. Fore wings narrow; second inferior vein almost close to the third, a little further from the first; third full six times further from the fourth than from the first. Hind wings moderately broad; second and third inferior veins united near the base; first near to the second; fourth remote from the third.

1. CREATONOTOS INTERRUPTA.

Pallide carnea; thorax vitta fusiformi nigra; abdominis dorsum coccineum, e maculis nigris trivittatum; tibiæ tarsique nigra; alæ anticæ vitta discali nigra apicem versus oblique interrupta; posticæ albidæ aut cinereæ, nonnunquam maculis submarginalibus nigris.

Phalæna interrupta, Linn. *Syst. Nat. Phal.* 116. *Sulz. Gesch.* 22, 3.

Bombyx Francisca, *Fabr. Mant. Ins.* ii. 131, 200; *Ent. Syst.* iii. 1, 480, 228. *Gmel. Syst. Nat.* i. 5, 2445, 589. *Oliv. Enc. Méth.* v. 100, 260.

Cretonotos interrupta, Hübn. *Verz. Schmett. (Phalænæ Veræ Hipocritæ Sphingiformes)*, 170, 1745.

a, b. Nepaul. Presented by Major-Gen. Hardwicke.

c, d. Ceylon. Presented by R. Templeton, Esq.

e, f. North India. From Mr. L. James' collection.

g. East Indies. From Archdeacon Clerk's collection.

2. CREATONOTOS EMITTENS.

Mas. Testacea; palpi fusci subtus albid, basi rufi; abdomen rufum, e maculis nigris univittatum, apice et subtus testaceum; alæ anticæ vitta interrupta discali fusca.

Male. Testaceous, with a slight saffron tinge. Palpi brown, whitish beneath, red at the base. Antennæ whitish, red at the base; pectinations black. Abdomen red, with a row of black spots, pale testaceous at the tip and beneath. Legs pale testaceous. Fore wings with a reddish tinge along the costa, and with a slender brown discal stripe, which is widely interrupted at two-thirds of the length of the wing; under side much paler. Hind wings pale testaceous. *Fem.?* — White. Palpi and antennæ brown; palpi beneath and antennæ towards the base white. Abdomen above

.2.S.

p 316 qp 316 qp

2. 'S2' 'S2'

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p 316 qp 316 qp 3

2. 'S2' 'S2'

yellow, with three rows of black spots. Fore wings with a brown discal stripe, which is interrupted towards the tips. Hind wings with a brown discal dot. Length of the body 4—4½ lines; of the wings 10—14 lines.

Var. β, male. Discal stripe of the fore wings much interrupted and almost obsolete. Hind wings with no discal dot, much smaller than *var. α*.

a, b. Ceylon. Presented by R. Templeton, Esq.

c. (Fem. ?) North India. From Mr. L. James' collection.

3. CREATONOTOS? VUTERIA.

Testacea; alæ anticæ guttis duabus discalibus punctisque marginalibus nigris; posticæ albæ.

Phalæna Vuteria, Cram. Pap. Exot. v. 161, pl. 36, f. 5.

Cape.

Genus 19. EVIUS.

Corpus breviusculum. Oculi magni, extantes. Proboscis corporis dimidio vix brevior. Palpi longiusculi, ascendentes; articulus 2us 10 multo longior; 3us minutus, conicus. Antennæ subpectinatæ. Abdomen alas posticas superans. Pedes sat graciles, non longi; tibiæ posticæ calcaribus quatuor minutis. Alæ sat angustæ; posticæ antice convexæ.

Empusa, p., Hübn.

Creatonotos, p., Hübn.

Automolis, p.? Hübn.

Body rather short. Eyes large and prominent. Proboscis nearly half the length of the body. Palpi rather long, ascending; second joint much longer than the first; third minute, conical. Antennæ minutely pectinated beneath. Abdomen extending some little distance beyond the hind wings. Legs rather slender, not long; hind tibiæ with four minute spurs. Wings rather narrow. Fore wings straight in front; first, second and third inferior veins contiguous at the base; fourth remote from the others. Hind wings convex in front.

A. Alæ anticæ flavo-variæ.

A. Alæ anticæ dimidio apicali flavo. - auro-coccineus, *Walk.*

A. Alæ anticæ flavo bimaculatæ. - - flavo-roseus, *Walk.*

B. Alæ anticæ flavo unifasciatæ. - - Psamas, *Cram.*

c. Alæ anticis maculis plurimis flavis. - - Hippias, *Stoll.*

B. Alæ anticæ non flavo variæ. - - bifasciatus, *Cram.*

1. EVIUS AURO-COCCINEUS.

Aureo-flavus ; caput coccineo fasciatus et bistrigatus ; palpi nigri, coccineo strigati ; antennæ piceæ, apice albæ ; thoracis latera et abdomen coccinea ; pedes albi ; coxæ et tibiæ anticæ coccineo vittatæ ; femora antica supra fusca ; alæ anticæ cinereo-rufæ, dimidio fere apicali aureo-flavo vitta arcuata e maculis quatuor fuscis, costæ plus dimidio basali albo ; posticæ rufæ, apices versus flavæ.

Golden yellow, white beneath. Head with a crimson streak on each side, and divided by a crimson band from the prothorax. Proboscis tawny. Palpi black, with a crimson stripe on each outer side. Antennæ piceous, testaceous towards the base, white towards the tips, crimson on the outer side towards the base. Thorax crimson on each side, hind part brownish lilac. Abdomen crimson above. Legs pure white ; fore coxæ and fore tibiæ with crimson stripes ; fore femora brown above. Fore wings grayish red for more than half the length from the base ; from thence to the tips golden yellow, with a discal semicircle of four brown dots. Costa white along more than half the length from the base. Hind wings red, yellow towards the tips. Length of the body 6 lines ; of the wings 14 lines.

a. Parà. From Mr. Bates' collection.

2. EVIUS FLAVO-ROSEUS.

Roseus, subtus flavus ; antennæ fuscae ; pedes flavi, femoribus tibiisque anticis supra rufis ; alæ anticæ macula magna costali subtrigona, 2aque minore exteriori flavis ; posticæ pallide luteæ.

Rosy, with a lilac bloom, pale yellow beneath. Proboscis testaceous. Antennæ brown, rose-colour at the base. Legs pale yellow ; fore femora and fore tibiæ red above. Fore wings with a large subtriangular yellow spot on the fore border beyond the middle, and a smaller one on the exterior border. Hind wings pale luteous. Length of the body 5 lines ; of the wings 13—14 lines.

a. Parà. Presented by J. P. G. Smith, Esq.

b. Honduras. From Mr. Dyson's collection.

3. EVIUS HIPPIA.

Fœm. Fuscus, thorax fascia antica albida, postice rufus ; abdomen rufum, apice album ; alæ anticæ dimidio basali fusco maculis flavis, apicali fusco guttis flavis, costa rufa ; posticæ testacæ.

Empusa Hippia, Hübn. Verz. Schmett. (*Phalæna Veræ Hipocritæ Sphingiformes*), 170, 1752.

Phalæna Bombyx Hippia, Stoll. Suppl. Cram. Pap. Exot. v. 57, pl. 12, f. 8.

Fem. Brown. Thorax with a whitish band in front; hind part red, Abdomen red; tip white. Fore wings brown for nearly half the length from the base, and along the costa, which is red, yellow from thence to the tips; the brown part has a concave border, contains a yellow discal dot, and beyond it a yellow subcostal spot; the yellow part has a few brown dots in an oblique line. Hind wings testaceous.

Surinam.

4. EVIUS PSAMAS.

Rufus; abdomen testaceum; alæ anticæ fascia perobliqua ocelloque nigris, apices versus flavæ macula maxima rufa nigro marginata; posticæ nigricantes.

Phalæna Psamas, Cram. Pap. Exot. iii. 72, pl. 234, f. G.

Cretonotos Psamas, Hübn. Verz. Schmett. (*Phalæna Veræ Hipocritæ Sphingiformes*), 170, 1746.

Berbice. Surinam.

5. EVIUS? BIFASCIATUS.

Fœm. Rufo-ferrugineus; proboscis brevis; antennæ simplices; alæ anticæ oblique nigro lineato-bifasciatæ.

Phalæna bifasciata, Cram. Pap. Exot. iii. 104, pl. 252, f. F.

Automolis bifascia, Hübn. Verz. Schmett. 171, 1759.

Surinam.

Genus 20. ARARA.

Fœm. Corpus cylindricum longiusculum. Oculi magni, exstantes. Proboscis corporis dimidio brevior. Palpi longiusculi, ascendentes; articulus 2us arcuatus, 1o multo longior; 3us conicus, minimus. Antennæ subpectinatae. Abdomen alas posticas longe superans. Pedes sat graciles, non longi; tibiæ posticæ calcaribus quatuor mediocriter longis. Alæ angustæ; posticæ antice convexæ.

Fem. Body cylindrical, rather long. Eyes large and prominent. Proboscis less than half the length of the body. Palpi rather long, ascending; second joint curved, very much longer than the first; third conical, very minute. Antennæ minutely pectinated beneath. Abdomen extending far beyond the hind wings. Legs

rather slender, not long; hind tibiæ with four spurs of moderate length. Wings narrow. Fore wings straight in front; first and second inferior veins nearly contiguous at the base; third much nearer to the second than to the fourth. Hind wings convex in front; discal areolet thickened; three inferior veins, first and second united at the base, third remote.

1. ARARA VITTIPES.

Fœm. *Ochracea*; *caput albido varium*; *palpi albidi, articulis 2o 3oque apice nigris*; *antennæ fulvæ*; *thorax nigro biguttatus*; *abdomen basim versus subtus et apud margines posticos albidum*; *pedes albidi, femoribus tibiisque nigro vittatis*; *alæ anticæ luteæ, ex parte ochraceæ, fascia subtrigona alteraque exteriori lata obliqua purpurascentibus vittisque nigris albido marginatis*; *posticæ pallide subluteæ, fere hyalinæ.*

Fem. Ochraceous. Head whitish about the eyes on each side of the vertex. Proboscis tawny. Palpi whitish; tips of the second and third joints black. Antennæ tawny, whitish above towards the tips. Thorax with a black dot on each side in front of the base of each fore wing. Abdomen whitish beneath towards the base; hind borders of the segments whitish. Legs whitish; femora and tibiæ with black stripes. Fore wings luteous, partly ochraceous, with a nearly triangular purplish band, whose greatest breadth is on the fore border when it extends from the base to beyond the middle of the wing; it is connected behind its base, (which is truncated) with another broad and very oblique band which proceeds from it to the middle of the exterior border; the veins in these bands are accompanied by black whitish-bordered stripes, and the bands also contain a few black dots. Hind wings nearly hyaline, with a slight pale luteous tinge which is most prevalent about the borders. Length of the body 5 lines; of the wings 12 lines.

a. Brazil. From Mr. Stevens' collection.

Genus 21. SCAPTIVS.

Mas. Corpus cylindricum, longiusculum. Oculi magni, exstantes. Proboscis corporis dimidio brevior. Palpi longiusculi, ascendentes; articulus 2us arcuatus, 1o multo longior; 3us conicus, minimus. Antennæ subserratæ. Abdomen alas posticas longe superans. Sexualia parva, occulta. Pedes validi, non longi; tibiæ posticæ calcaribus quatuor longiusculis. Alæ angustæ, antice subconvexæ.

Male. Body cylindrical, rather long. Eyes large, prominent. Proboscis less than half the length of the body. Palpi rather long, ascending; second joint curved, very much longer than the first; third conical, very minute. Antennæ minutely serrated beneath. Abdomen extending far beyond the hind wings. Sexualia small, concealed. Legs rather stout, not long; hind tibiæ with four rather long spurs. Wings narrow. Fore wings slightly convex in front; first and second inferior veins united at the base; third full thrice further from the fourth than from the second. Hind wings convex in front; three inferior veins; first and second united at the base; third rather remote.

1. SCAPTIVS DITISSIVS.

Mas. *Flavus; caput antice, pectus et abdomen subtus alba; palpi albid; antennæ fulvæ; thorax rufo quinquevittatus, lateribus anticis fuscis; abdomen supra rufum; pedes albi, coxis tibiisque anticis supra testaceis, femoribus anticis supra fuscis; alæ anticæ cervinæ, purpureo-fusco variæ, venis rufis, triente apicali oblique flava, macula purpureo-fusca rufo marginata; posticæ fusæ, subtus basi antice flavæ.*

Male. Yellow. Head in front and beneath, pectus and under side of the abdomen white. Proboscis and antennæ tawny, the latter red and yellow at the base. Palpi whitish. Thorax with five red stripes, pale brown on each side in front of the wings. Abdomen bright red above. Legs white; fore coxæ and fore tibiæ testaceous above; fore femora brown above. Fore wings fawn-colour, varied with purplish brown for nearly two-thirds of the length; veins red; apical third part obliquely yellow, containing a semidetached purplish brown red-bordered spot; veins luteous. Hind wings dark brown, yellow beneath in front towards the base. Length of the body 5 lines; of the wings 12 lines.

a. Ega, on the Amazon. From Mr. Bates' collection.

Genus 22. EMPUSA.*

Corpus lineare, cylindricum, longiusculum, sat validum. Proboscis corporis dimidio brevior. Palpi longi, ascendentes, arcuati, subtus dense pilosi; articulus 2us 1us duplo longior; 3us lanceolatus, 1o paullo longior. Antennæ graciles, subtus serratæ. Abdomen

* This genus is accidentally omitted in the synopsis of genera (p. 588), where it should follow *Scaptius*. Its longer palpi, with the third joint lanceolate, distinguish it from that genus.

alas posticas longe superans. Pedes mediocriter longi; tibiæ posticæ calcaribus quatuor longiusculis. Alæ sat longæ et angustæ; anticæ lanceolatæ.

Empusa, p., *Hübner. Verz. Schmett.* 170.

Phalæna, p., *Cram.*

Body linear, cylindrical, rather long and stout. Proboscis less than half the length of the body. Palpi long, ascending, thickly pilose beneath, curved; second joint about twice the length of the first; third lanceolate, a little longer than the first. Antennæ slender, serrated beneath. Abdomen extending far beyond the hind wings. Legs moderately long; hind tibiæ with four rather long spurs. Wings rather long and narrow. Fore wings lanceolate, almost straight in front; discal fold distinct in the discal areolet; first and second inferior veins almost contiguous at the base; third full six times further from the fourth than from the second. Hind wings slightly convex in front, with three inferior veins.

A. Abdomen non fasciatum.

A. Alæ anticæ dimidio apicali argenteo. - - vitrea, *Cram.*

B. Alæ anticæ fusco-testaceæ. - - Tybris, *Cram.*

B. Abdomen fasciatum. - - - - Scyton, *Fabr.*

1. EMPUSA VITREA.

Fulva; caput fasciis duabus nigro-fuscis; palpi nigri; antennæ fulvæ; thorax fasciis nigro-fuscis; abdomen subtus testaceum; pedes albidii, femoribus anticis supra fusco vittatis; alæ anticæ fusco-fulvæ, guttis nigris albido marginatis, basalibus, vittisque nigris albis cyaneisque, triente apicali oblique cyaneo-alba nigro triguttata; posticæ rufo-fulvæ, marginibus venisque albis.

Phalæna vitrea, *Cram. Pap. Exot.* iii. 151, pl. 276, f. c.

Empusa vitrea, *Hübner. Verz. Schmett.* (*Phalæna Veræ Hipocritæ Sphingiformes*) 170, 1748.

Surinam.

Tawny. Head with two blackish brown bands. Proboscis testaceous. Palpi black. Antennæ tawny, whitish above. Thorax with blackish brown bands in front, the third interrupted; a blackish brown spot on the disk and two tufts of the same colour behind. Abdomen testaceous beneath. Legs whitish; fore femora striped above with brown. Fore wings brownish tawny, with some black whitish bordered dots near the base, and with black stripes, with which are three white and blue stripes; there are also two white

dots near the interior angle; more than one-third part from the tips is obliquely white with a blue tinge, and contains three black dots in a line parallel to the exterior border; the veins and cilia in this part and the whole of the costa are white; under side blue-white, with a few black marks, reddish tawny towards the base. Hind wings reddish tawny, with white borders and veins.

a. Rio Janeiro. From Mr. Stevens' collection.

2. EMPUSA? TYBRIS.

Pallide testacea; caput album; thorax canus, luteo maculatus, antice albus; abdomen luteum; alæ anticæ basi luteo guttatæ, triente basali albo-fusco plagiata, fasciis duabus obliquis e guttis fuscis; posticæ costa alba, margine interno luteo.

Phalæna Tybris, Cram. Pap. Exot. i. 145, pl. 92, f. D.

Empusa Tybris, Hübn. Verz. Schmett. (Phalænæ Veræ Hipocritæ Sphingiformes) 170, 1751.

Surinam.

3. EMPUSA? SCYTON.

Albida; abdomen atrum glauco fasciatum, caput luteum; thorax cinereo oblique bifasciatus; apice luteum; alæ anticæ macula costali apicibus, fasciisque duabus obliquis cinereis, fascia 1a abbreviata; posticæ cinereæ, antice albidæ semihyalinæ.

Zygæna Scyton, Fabr. Sp. Ins. ii. 164, 40; Mant. Ins. ii. 106, 49; Ent. Syst. iii. 1, 401, 52.

Sphinx Scyton, Cram. Pap. Exot. ii. 5. pl. 99, f. B.

Sphinx Zygæna Scyton, Gmel. ed. Syst. Nat. i. 5, 2398, 144.

Empusa Scyton, Hübn. Verz. Schmett. (Phalænæ Veræ Hipocritæ Sphingiformes) 170, 1752.

Surinam.

Genus 23. IDALUS.

Corpus breviusculum. Oculi magni. Proboscis corporis dimidio brevior. Palpi mediocriter longi; articulus 2us 1o multo longior; 3us minimus. Pedes sat graciles, non longi; tibiæ posticæ calcaribus quatuor parvis. Mas.—Antennæ breviter pectinatæ. Abdomen alas posticas paullo superans. Sexualia parva, occulta. Alæ posticæ brevissimæ, antice dilatatæ, apice truncatæ. Fœm.—Antennæ simplices. Abdomen alas posticas sat longe superans. Alæ posticæ breviusculæ.

Phalæna, p., Cram.

Empusa, p., Hübn.

Body rather short. Eyes large. Proboscis less than half the length of the body. Palpi moderately long; second joint much longer than the first; third extremely minute. Legs rather slender, not long; hind tibiæ with four rather small spurs. Fore wings long, slightly pointed; discal fold not distinct; first, second and third inferior veins near together at the base; third about thrice further from the fourth than from the first. Hind wings slightly convex in front. *Male*.—Antennæ pectinated; branches short. Abdomen extending a little beyond the hind wings. Sexual parts small, concealed. Hind wings very short, dilated in front, truncated at the tips. *Female*.—Antennæ simple. Abdomen extending some distance beyond the hind wings. Hind wings rather short.

1. IDALUS ADMIRABILIS.

Albus; caput supra luteum; palpi basi rufi; antennæ fuscae supra albidæ; thorax fascia lata lutea guttisque duabus anticis fuscis; pectoris latera rufa; abdomen supra læte rufum; coxæ anticæ subtus rufæ; alæ anticæ luteæ. Mas.—*Alæ anticæ basim versus albæ luteo fasciatæ, fasciis duabus nigricantibus, 1a basali, strigaeque postica basali rufescente. Fœm.*—*Alæ anticæ fasciis duabus fuscis albo marginatis, macula discali fusca, liturisque duabus rufis; posticæ rufæ, albo marginatæ aut ciliatæ.*

Phalæna admirabilis, Cram. Pap. Exot. ii. 11, pl. 103, f. G.
Empusa admirabilis, Hübn. Verz. Schmett. 170, 1747.

Surinam.

White. Head luteous above. Proboscis tawny. Palpi red towards the base, black above towards the tips. Antennæ brown, whitish above. Thorax with a broad luteous band, in front of which are two brown dots. Pectus red along each side. Abdomen bright red above. Fore coxæ red beneath. Fore wings luteous. *Male*.—Fore wings towards the base white, including a luteous band, which is abbreviated hindward; a blackish band at the base and another oblique one at the end of the white part; a reddish streak at the base of the interior border; veins white in the white and blackish parts. *Female*.—Fore wings with two brown bands, bordered with white; a brown spot in the disk at three-fourths of the length, and a red mark at the base, and another at the end of the inner border. Hind wings red, white along the fore border, and with a white fringe. Length of the body $4\frac{1}{2}$ —5 lines; of the wings 14—16 lines.

a, b. Brazil. From Mr. Milne's collection.

Genus 24. HYPERCOMPA.

Palpi brevissimi, ascendentes, pilosi, squamis appressis; articulus 1us apice tumidus, 2i longitudine; 3us brevis, ovatus. Proboscis capite multo longior. Antennæ in utroque sexu simplices, ciliatæ. Alæ dense squamosæ. Pedes robusti, squamosi; femora squamis appressis; tibiæ anticæ femoribus multo breviores.

Hypercompa, *Steph. Ill. Brit. Ent. Haust.* ii. 67.

Phalæna-Noctua, p., *Linn.*; *Berk.*; *Don.*; *Stew.*; *Turt.*

Arctia, p., *Schr.*

Noctua, p., *Esp.*; *Haw.*

Callimorpha, p., *Latr.*; *Leach.*; *Sam.*; *God.*; *Meig.*; *Herr.-Schæff.*

Hypercompæ, p., *Hübner.*

Euprepia, p., *Ochs.*

Euplagia et Heraclia, p., *Hübner. Verz. Schmett.* 180.

Heraclia, *Westw.*

Europe.

A. Alæ anticæ fasciis obliquis sulphureis. - - - Hera, *Linn.*

B. Alæ anticæ maculis albis. - - - Dominula, *Linn.*

Group 1.

Alæ anticæ non duplo longiores quam latiores, apicibus distincte angulosis, margine externo subobliquo.

Fore wings not twice longer than broad, rounded at the tips; outer border slightly oblique.

1. HYPERCOMPA HERA.

Abdomen rubrum, nigro signatum; alæ anticæ virescente nigrae fasciis obliquis sulphureis; posticæ rubicundæ maculis tribus nigris; tibiæ posticæ femoribus longiores.

Noctua Hera, *Linn. Syst. Nat.* i. 2, 834, 91. *Esper, Schmett.* iv. 41, pl. 83. *Noct.* 4, f. 5—7; pl. 34, 189. *Noct.* 110, f. 6—8.

Noctua tripunctaria, *Poda, Mus. Græc.* 89, 20.

Arctia Hera, *Schr. Faun. Boic.* ii. 2, 152, 3.

———, *Mouff. Ins.* 91, 7, 4. *Geoffr. Hist. Ins.* ii. 145, 74. *Röes. Ins. Bel.* iv. 194, pl. 28, f. 3. *Kleem, Beitr.* 345, pl. 41, f. 1—5. *Schæff. Elem.* pl. 10, f. 1. *Icon.* pl. 29, f. 1, 2. *Ernst, Pap. d' Eur.* iv. 123, pl. 144, f. 190, a—i.

Phalæna Hera, Gmel. ed. *Syst. Nat.* i. 5, 2442, 91. *Schweiz. Ins.* 36, 693.

Phalæna Plantaginis, Scop. *Ent. Carn.* 263.

Bombyx Hera, Fabr. *Ent. Syst.* iii. 1, 474, 209. *Oliv. Enc. Méth.* v. 95, 242. *Hübner. Bomb.* 130, 1, pl. 27, f. 116. *Larv. Lep.* iii. *Bomb.* ii. *Veræ*, H, f. 2. *Wien. Verz.* 52. *Fam. E.* 3. *Illig. N. Auss. dess.* i. 78, 3. *Schæff. Icon.* 40 (*Nomencl. Panz.*), pl. 29, f. 1, 2. *Schr. Faun. Boic.* ii. 1, 258, 1432. *Panz. Faun. Germ.* 31, 25. *Borkh. Eur. Schmett.* ii. 205, 62. *Rhein. Mag.* i. 337, 171. *Rossi, Faun. Etr.* ii. 776, 1099. *Ed. Illig.* 281, 1099. *Lang. Verz.* ii. 89, 686, 687. *Brahm, Ins.* 63, 25. *Schwarz. Raup.* 9, 107, 573, 702. *Esp. Schmett.* iv. pl. 83, f. 5—7; pl. 189, f. 6—8. *Treits. Hulfsb. Schmett.* 221, 97.

Eyprepia Hera, Ochs. *Schmett.* iii. 319, 10; iv. 60, 208, 10.

Euplagia Hera, Hübner. *Verz. Schmett.* (*Phalænæ Veræ Callimorphæ Variegatæ*) 180, 1858.

Callimorpha Hera, Latr. *Gen. Crust. et Ins.* *God. Pap. de France*, iv. 368, 116, pl. 38, f. 1. *Herr.-Schæff. Suppl.* 151, 44, 4. *Speyer, Ent. Zeit. Stett.* xiii. 285, 5. *Meig. Handb.* 140, 92; *Syst. Besch. Eur. Schmett.* iii. 40, 3, pl. 86, f. 2.

Bombyx (Eyprepia) Hera, Freyer, *Neuere Beitr. Schmett.* iii. 128, pl. 284.

a. Europe. From Dr. Leach's collection.

b—e. Europe. From M. Becker's collection.

f, g. Athens. Presented by — Merlin, Esq.

h. Europe.

Group. 2.

Alæ anticæ duplo longiores quam latiores, apice rotundatæ, margine externo obliquo.

Fore wings twice longer than broad, rounded at the tips; outer border oblique.

2. HYPERCOMPA DOMINULA.

Abdomen rubrum, linea dorsali lateribusque nigris; alæ anticæ viridi atræ, maculis albo-flavescentibus; posticæ rubræ, nigro maculatæ; tibiæ posticæ femoribus longiores.

Noctua Dominula, Linn. *Syst. Nat.* ii. 834, 90. Gmel. ed. *Syst. Nat.* i. 5, 2442, 90. *Berk. Syn.* i. 139. *Don. Nat. Hist. Brit. Ins.* iv. pl. 141. *Stew. Fl. Nat. Hist.* ii. 158. *Turt. Syst. Nat.* 225. *Esp. Schmett.* iv. 38, pl. 83. *Noct.* 4, f. 1—4. *Scop. Ent. Carn.* 506. *Wilk. Pap.* 19, pl. 3, 3. *Merian, Ins. Eur.* ii. pl. 38.

- , *Albin, Nat. Hist. Engl. Ins.* pl. 22, f. 31, a—d.
Harr. Aus. pl. 40, f. a—d. *Geoffr. Hist. Ins.* ii. 107, 7.
Röes. Ins. Bel. iii. 267, pl. 47, f. . *Ernst, Pap. d'Eur.* iv.
 142, pl. 152, f. 197, a—h. *Schæff. Icon.* pl. 77, f. 3, 4.
- Bombyx Dominula*, *Fabr. Sp. Ins.* ii. 200, 130; *Mant. Ins.* ii. 130,
 183; *Ent. Syst.* iii. 1, 475, 210. *Oliv. Enc. Méth.* v. 96, 243.
Wien. Verz. 53. *Fam. E.* 8. *Illig. N. Ausg. dess.* i. 84, 8.
Scop. Ent. Carn. 204, 506. *Schæff. Icon. Nomencl. Panz.* 92,
 pl. 77, f. 3, 4. *Wilkes, Nat. Hist.* pl. 38. *Borkh. Eur.*
Schmett. iii. 202, 61. *Rhein. Mag.* i. 339, 174. *Fuessl.*
Schweiz. Ins. 36, 692. *N. Mag.* ii. 60, 90. *Esp. Schmett.* iv.
 pl. 83, f. 1—4; pl. 184, f. 4. *Hufnagel, Pl. in Berl. Mag.* iii.
 2, 204, 2. *Vieweg, Pl. Verz.* i. 62, 66. *Lang. Verz.* ii. 91,
 703, 704. *Treits. Hulfsb. Schmett.* 221, 96.
- Phalæna dominula*, *Brahm, Ins. Kal.* 64, 26. *Schwarz. Raup.*
 107, 406, 573, 702, 762.
- Bombyx Domina*, *Hübner. Bomb. (mas)* 118, pl. 27, f. 117 (fœm.),
 131, 2, pl. 52, f. 223. *Larv. Lep.* iii. *Bomb.* ii. *Veræ, H.*
 f. 1, a, b.
- Var. Bombyx Persona*, *Hübner. Beitr.* ii. 4; iv. 97, 128, pl. 5.
- Var. Bombyx alpina*, *Acerbi, Voy. au Cape Nord.* iii. 111, 5,
 pl. 114, 4. *Alæ anticæ nigræ, flavo maculatæ; posticæ coc-*
cineæ, basi fasciisque macularibus, concatenatis atris.
- Noctua donna*, *Esp. Schmett.* iv. 3, pl. 180, *Noct.* 101, f. 1; 19, pl.
 184. *Noct.* 105, f. 4.
- Arctia dominula*, *Schr. Faun. Boic.* ii. 1, 261, 1437.
- Callimorpha Dominula*, *Latr. Gen. Crust. et Ins.* iv. 221. *God.*
Lep. de France, iv. 372, 117, pl. 38, f. 2, 3. *Meig. Handb.*
 140, 91; *Syst. Besch. Eur. Schmett.* iii. 41, 4, pl. 86, f. 4.
Herr.-Schæff. Suppl. 151, 42, 2. *Speyer, Ent. Zeit. Stett.*
 xiii. 285, 6.
- Eyprepia dominula*, *Ochs. Schmett. Eur.* iii. 316, 9; iv. 60,
 207, 10.
- Bombyx (Eyprepia) Dominula*, *Freyer, Neuere Beitr. Schmett.* iv.
 139, pl. 369, f. 1.
- Var. Bombyx (Eyprepia) persona*, *Freyer, Neuere Beitr. Schmett.*
 iii. 110, pl. 272, f. 2.
- Heraclia Dominula*, *Hübner. Verz. Schmett. (Phalæna Veræ Calli-*
morphæ Variegatæ) 180, 1856. *Westw. & Humph. Moths.* i.
 96, pl. 19, f. 16, 17.
- Euprepia Dominula*, *Freyer, Ent. Zeit. Stett.* ii. 90. *Costa, Ann.*
Soc. Ent. Fr. xi. 239, pl. 9, f. 7, 8.
- Hypercompa Dominula*, *Steph. Ill. Brit. Ent. Haust.* ii. 67. *Var.*
Bree, Mag. Nat. Hist. vi. 541, f. 72.

Var. *Abdomen nigro-viride*.

Noctua Donna, *Esp. Schmett.* iv. pl. 180, f. 1.

Callimorpha Donna, *Meig. Syst. Besch. Eur. Schmett.* iii. 41, 5, pl. 86, f. 5.

Var. *a.* Rossica, *Kol. Mel. Ent.* 95. *Zeller, Ent. Zeit. Stett.* ix. 372. *Alæ posticæ et abdomen lutea.*

Russia. Transcaucasia.

a. England. Presented by H. Doubleday, Esq.

b—r. England. From Mr. Stephens' collection.

s—x. England. From Mr. Foxcroft's collection.

y. England.

z—cc. Europe. From M. Becker's collection.

North America.

A. *Alæ posticæ luteæ.*

A. *Alæ anticæ fuscae, vittis macularibus albis.* Clymene, *Esper.*

B. *Alæ anticæ lutescentes, fusco submarginatæ.* Comma, *Walk.*

B. *Alæ posticæ albæ.*

A. *Alæ anticæ maculis albis.* - - - Lecontei, *Boisd.*

B. *Alæ anticæ vitta maculisque duabus albis.* - - - contigua, *Walk.*

C. *Alæ anticæ vitta maculaque albis.* - - - confinis, *Walk.*

The North American species, with the exception of *H. Comma*, much resemble *H. Hera* in structure, but differ much from it in the colour and markings of their wings. *H. Comma* forms a distinct group in the genus.

3. HYPERCOMPA CLYMENE.

Lutea; antennæ nigrae; palpi apice nigris; prothorax fusco biguttatus; thoracis discus albus, fusco univittatus; abdomen sæpissime maculis dorsalibus fuscis; alæ anticæ fuscae vitta basali angulata, maculis tribus anticis unaque postica subapicali divisa albis; posticæ sæpissime maculis duabus posticis fuscis.

Noctua Clymene, *Esper, Schmett.* iv. 22, 10, pl. 182. *Noct.* 103, f. 1.

Bombyx Colona, *Hübner, Bomb.* 135, 8, pl. 31, f. 135.

Eyprepia Clymene, *Ochs. Schmett. Eur.* iv. *Suppl.* 208, 11.

Callimorpha Clymene, *Meig. Syst. Besch. Eur. Schmett.* iii. 40, pl. 86, f. 2.

Phalæna Clymene, *Brown, Ill. of Zool.* 38. *Hübner, Bomb.* 39.

Haploa Clymene, *Hübner, Verz. Schmett. (Phalænæ Veræ Hypercompæ Coloreæ),* 182, 1876.

Var. a. Hind wings with three submarginal spots and a marginal streak.

Var. β. Hind wings with two submarginal spots.

Var. γ. Hind wings with one submarginal spot.

Var. δ. Hind wings unspotted.

a. United States. Presented by E. Doubleday, Esq.

b—d. ——— ?

4. HYPERCOMPA LECONTEI.

Alba; caput, prothorax et pedes lutea; antennæ nigræ; palpi apice nigri; thorax et abdomen fusco univittata; alæ anticæ fuscae vitta antica fasciæque subapicali e maculis albis; posticæ nonnunquam gutta postica fusca.

Callimorpha Lecontei, Boisd.

Var. α. Fore wings with four white spots; second nearly round.

Var. β. Second spot forked; fourth interrupted.

Var. γ like *var. β.* Third spot nearly divided.

Var. δ like *var. β.* Second and third spots divided.

a—d. Trenton Falls, New York. Presented by E. Doubleday, Esq.

e, f. ——— ?

5. HYPERCOMPA CONFINIS.

Alba; caput, prothorax, abdomen basi et coxæ anticæ ex parte lutea; thorax et abdomen fusco vittata; alæ anticæ marginibus plerumque fasciæque obliqua fuscis.

White. Head, prothorax, fore coxæ and abdomen at the base luteous. Proboscis tawny. Palpi with black tips. Antennæ black. Thorax and abdomen with a brown stripe. Fore wings brown, with a discal slightly angular white stripe, and an elongate-triangular oblique subapical white band. Length of the body 6 lines; of the wings 18 lines.

a—d. United States. From Mr. Dyson's collection.

6. HYPERCOMPA CONTIGUA.

Alba; caput et prothorax lutea; palpi nigri, basi lutei; antennæ nigræ; thorax et abdomen fusco univittata; alæ anticæ marginibus plerumque fascia postmedia vittaque subapicali fuscis; posticæ macula submarginali fusca.

White. Head, prothorax and fore coxæ luteous. Proboscis tawny. Palpi black, luteous at the base. Antennæ black. Thorax and abdomen with a brown stripe. Fore wings brown, with a white

discal stripe, which widens from the base to a little beyond the middle, and with two large subapical white spots. Hind wings with a small brown spot near the hind border. Length of the body 6 lines; of the wings 18 lines.

a. United States. Presented by E. Doubleday, Esq.

7. HYPERCOMPA COMMA.

Luteo-testacea; palpi apice nigri; antennæ nigrae; thorax et abdomen fusco univittata; alæ anticæ marginibus plerumque maculaque arcuata postica fuscis; posticæ nonnunquam macula submarginali fusca.

Luteous, partly testaceous. Proboscis tawny. Palpi with black tips. Antennæ black. Thorax and abdomen with a brown stripe. Fore wings above with a brown border, which is interrupted at the tips and by the hind angle, near which there is a curved brown streak. Hind wings occasionally with a small round brown spot near the hind border. Length of the body 7 lines; of the wings 20 lines.

a. United States. Presented by E. Doubleday, Esq.

b. Virginia. From Mr. Milne's collection.

Africa.

The only South African species of this genus forms a peculiar group; it somewhat resembles *H. Hera* in form, but the colours and markings of the wings are quite different; the fore wings are broader, and their interior and exterior borders are more rounded.

8. HYPERCOMPA BELLATRIX.

Lutea; alæ maculis fasciisque flexuosis nigro-cyaneis; corpus nigro-cyaneo maculatum.

Callimorpha bellatrix, *Dalm. Anal. Entom.* 50, 26.

Euchelia pardalina, *Boisd. Herr.-Schæff. Lep. Exot. Sp. Ser.* 1, f. 117.

a. South Africa. Presented by Dr. A. Smith.

b. Port Natal. From M. Gueinzius' collection.

c, d. ———? From Mr. Milne's collection.

Asia.

A. Alæ anticæ viridescentes.

A. Alæ posticæ luteæ.

A. Abdomen coccineum.

B. Abdomen luteum.

- - - - - principalis, *Kollar.*

- a.* Alarum anticarum maculæ subapicales rotundatæ. *histrion, Walk.*
- b.* Alarum anticarum maculæ subapicales elongatæ. *plagiata, Walk.*
- B.* Alæ posticæ albidæ. - - - - *equitalis, Kollar.*
- B.* Alæ anticæ nigro-fuscæ aut nigræ.
- A.* Alæ posticæ luteæ.
- A.* Alæ posticæ maculatæ.
 - a.* Alæ anticæ albido vittatæ. - - *imperialis, Kollar.*
 - b.* Alæ anticæ albo maculatæ. - - *longipennis, Walk.*
- B.* Alæ posticæ immaculatæ, nigro marginatæ. *Lemnina, Boisd.*
- B.* Alæ posticæ fuliginosæ, flavido contaminatæ. *Leopardina, Kollar.*
- C.* Alæ anticæ subcinereæ. - - - - *Marchalii, Guér.*
- D.* Alæ anticæ flavæ. - - - - *Lerne, Boisd.*
- E.* Alæ anticæ albidæ.
- A.* Abdomen rufum. - - - - *Pasimuntia, Cram.*
- B.* Abdomen luteum, nigro maculatum. *multigullata, Walk.*

The Asiatic *Hypercompæ* in the British Museum form four groups. The first, of *H. longipennis*, is distinguished by the slender body and the narrow and elongated fore wings. In *H. principalis* and *H. equitalis*, the body is rather slender, but the wings are broader and less elongated. In *H. histrion* and *H. plagiata*, the body is much thicker, and in the fourth group with *H. imperialis* it is very thick.

9. HYPERCOMPA PRINCIPALIS.

Cinnabarina; thorax viridi-æneus, flavo vittatus; abdomen viridi maculatum; alæ anticæ obscure æneo-virides copiosissime flavo maculatæ; posticæ flavæ, nigro radiatæ.

Euprepia principalis, Kollar, *Kaschmir von Von Hugel*, 465, 1, pl. 20, f. 2.

Himalaya Mountains.

Body red. Head with two black dots between the eyes, two behind, and a large black spot in front; also with two black dots beneath the eyes, which are partly bordered with yellow hairs. Palpi red, with black spots and tips. Proboscis tawny. Antennæ black. Legs black, striped with yellow; coxæ red, varied with yellow, spotted with black.

- a.* Himalaya Mountains. Presented by the Entomological Club.
- b.* Himalaya Mountains. From Mr. Leadbeater's collection.

10. HYPERCOMPA EQUITALIS.

Fusco-olivacea ; thorax æneus, albo vittatus ; abdomen basi apiceque rubrum ; alæ anticæ fusco-olivaceæ, albo maculatæ ; posticæ albæ, fusco venosæ et maculatæ.

Euprepia equitalis, Kollar, *Kaschmir von Von Hugel*, 465, 2, pl. 20, f. 3.

Himalaya Mountains.

Head red, pale yellow about the eyes, with two black dots between the antennæ, two behind and two beneath, and a large black spot in front. Palpi red, with black spots and tips. Proboscis tawny. Antennæ black. Thorax æneous green, with two pale yellow stripes, in front with one stripe which is partly red, partly pale yellow. Pectus red, with black spots. Abdomen blackish green, red on each side and at the tip; under side pale yellow, middle stripe and hind borders of the segments brown. Fore wings æneous green, with many oblong subquadrate whitish spots, which form a forked band at two-thirds of the length. Hind wings whitish, with more or less æneous green spots along the hind border, and with an æneous green stripe near the inner border; veins brown. Legs brown, streaked with pale yellow. Length of the body 11 lines; of the wings 34 lines.

a—c. Nepaul. Presented by Major.-Gen. Hardwicke.

d. Himalaya Mountains. Presented by the Entomological Club.

11. HYPERCOMPA HISTRIO.

Fœm. Læte flava ; corpus maculis nigro-viridibus ; antennæ nigrae ; abdomen fasciis dorsalibus nigro-viridibus ; pedes nigro-cyanei, flavo strigati ; alæ anticæ viridi-nigræ, maculis sexdecim albis unaque flava subtrigona ; posticæ fasciis tribus irregularibus macularibus atris.

Fem. Bright yellow. Head with a large blackish green spot in front. Proboscis testaceous. Antennæ black. Prothorax with a large blackish green spot on each side. Thorax blackish green along each side, and with a large dorsal conical blackish green spot. Abdomen with a blackish green dorsal band on each segment; under side with three rows of blackish green spots. Legs blackish blue, streaked with yellow. Fore wings greenish black; each with sixteen white spots of various size and form, and with one nearly triangular yellow spot towards the costa, and a little before the middle. Hind wings bright yellow, with three irregular macular

deep black bands, the innermost one abbreviated in front, the outermost containing in front some small yellow spots. Length of the body 13 lines; of the wings 38 lines.

a. Shanghai, North China. From Mr. Cuming's collection.

b. North China. From Mr. Fortune's collection.

12. HYPERCOMPA PLAGIATA.

Nigro-viridis; caput, thorax et abdomen luteo fasciata; thorax luteo sexmaculatus; femora basi flavo strigata; alæ anticæ maculis plurimis strigisque subapicalibus flavo-albis; posticæ læte flavæ, fasciis duabus macularibus, macula discali fasciaque marginali nigro-viridibus.

Blackish green. Head with a luteous band behind. Proboscis and antennæ black. Prothorax with a posterior luteous band. Thorax with four dorsal luteous spots, with a luteous spot on each shoulder, and with a luteous hind border. Abdominal segments with luteous bands. Femora streaked with yellow towards the base. Fore wings with many yellowish white spots of various size (one or two of them mostly bright yellow), and with a subapical band of broad yellowish white streaks. Hind wings bright yellow, with two macular blackish green bands, and with a discal spot, and a more or less interrupted marginal band of the same colour. Length of the body 11—13 lines; of the wings 32—36 lines.

a, b. Silhet. Presented by E. Doubleday, Esq.

13. HYPERCOMPA IMPERIALIS.

Nigra; caput macula quadrata, thorax vittis marginalibus pallide flavis nigro oculatis; abdomen rubro-nigroque annulatum; alæ anticæ vittis duabus pallide flavis basi in angulum acutum confluentibus, margine externo lineolisque duabus ejusdem coloris; posticæ flavicantes nigro maculatæ.

Euprepia imperialis, Kollar, *Kaschmir*, von Von Hugel, 466, pl. 21, f. 1.

Himalaya Mountains.

14. HYPERCOMPA LONGIPENNIS.

Alæ anticæ plus duplo longiores quam latiores, apice rotundatæ, margine externo perobliquo.

Fore wings more than twice longer than broad, rounded at the tips; outer border very oblique.

Atra; caput et thorax luteo varia; abdomen luteum, e maculis nigris trivittatum; alæ anticæ e maculis quinque albis bifasciatæ, basi albo guttata; posticæ luteæ maculis apicibusque nigris, his albo unimaculatis.

Black. Head with two luteous dots on each side. Thorax in front with two luteous ringlets, which emit two short oblique luteous stripes hindward. Pectus luteous, with black spots. Abdomen with three rows of black spots, extending as far as the hind wings. Fore wings with some white dots at the base, and with two bands, the first composed of two large white spots, the second of three smaller white spots; a white dot on the hind border, most apparent beneath, between the two dots and opposite the tips of the hind wings. Hind wings luteous, black at the base, and with two stripes of black spots; tips black, each with a white spot. Legs with testaceous stripes. Length of the body 8 lines; of the wings 28 lines.

a. Silhet. From Mr. Argent's collection.

15. HYPERCOMPA LEMNIA.

Abdomen nigrum, annulis aurantiacis; alæ anticæ nigræ macula media strigaque subpostica albis; posticæ aurantiacæ, margine lato nigro.

Callimorpha Lemnia, *Boisd. Voy. de l'Astrolabe*, Pt. 1. *Lep.* 20
2, pl. 5, f. 7.

Amboina.

16. HYPERCOMPA LEOPARDINA.

Flavida; caput nigro bimaçulatum et trivittatum; abdomen rubrum, nigro maculatum; alæ anticæ nigræ, flavido venosæ et maculatæ; posticæ fuliginosæ, flavido contaminatæ.

Euprepia Leopardina, *Kollar, Kaschmir, von Von Hugel*, 467, 4, pl.
21, f. 2.

Himalaya Mountains.

17. HYPERCOMPA MARCHALII.

Alæ anticæ subcinereæ, fasciis undato fuscis punctoque medio nigro; posticæ flavæ, apice macula minima fusca; vertex, thorax et abdomen flava, nigro punctata; alæ anticæ subtus pallido fusca, punctis duabus nigris; posticæ flavæ, puncto medio nigro; abdominis latera nigro punctata.

Callimorpha? Marchalii, *Guér.-Voy. Delessert, Hist. Nat.* 91, pl.
26, f. 2.

Neilgherry Mountains.

18. HYPERCOMPA PASIMUNTIA.

Cervino-alba; thorax luteo bivittatus; abdomen rufum; alæ anticæ macula basali fasciis duabus obliquis postice connexis, (1a undulata, 2a extus excavata,) maculisque exterioribus fuscis posticæ rufæ.

Phalæna Pasimuntia, *Cram. Pap. Exot.* iv. 149, pl. 367, f. H.

Haploa Pasimuntia, *Hübner. Verz. Schmett.* 182, 1877.

Amboina.

19. HYPERCOMPA? LERNE.

Alæ omnes flavæ, margine nigro, striga postica albida; anticæ litura costali nigra.

Callimporpha Lerne, *Boisd. Voy. de l'Astrolabe*, Pt. 1. *Lep.* 207, 3, pl. 5, f. 2.

New Guinea.

20. HYPERCOMPA MULTIGUTTATA.

Mas. Albida; palpi supra nigri; antennæ nigræ; thorax nigro sex maculatus; abdomen supra luteum, e maculis nigris trivittatum; alæ anticæ e guttis nigris septem subfasciatæ; posticæ luteæ fasciis variis guttularibus nigris.

Male. Whitish. Palpi black above. Antennæ black. Thorax with six black spots. Abdomen luteous above, with three rows of black spots above, and with two beneath. Fore wings with seven imperfect very oblique bands of black dots. Hind wings pale luteous; posterior half with one, two or three oblique bands of black dots. Length of the body 6—7 lines; of the wings 16—20 lines.

a—c. Nepaul. Presented by Major-Gen. Hardwicke.

Australia.

- | | | |
|--------------------------------|-------|----------------------------|
| A. Alæ nigræ, albo variæ. | - - - | Australasiæ, <i>Donov.</i> |
| B. Alæ fulvæ, nigro marginatæ. | - - - | concolor, <i>Boisd.</i> |

21. HYPERCOMPA AUSTRALASIÆ.

Corpus aurantiacum; alæ concolores, nigræ, albo variegatæ, macula magna alba; anticæ maculis aurantiacis.

Bombyx Australasiæ, *Donov. Epet. Ins. New Holl.* pl.

Callimorpha Australasiæ, *Boisd. Voy. de l'Astrolabe*, Pt. 1. *Lep.* 206, 1.

New Holland.

22. HYPERCOMPA CONCOLOR.

Alæ quatuor concolores aurantiaco-fulvæ margine latissimo nigro micante.

Callimorpha concolor, *Boisd. Voy. de l'Astrolabe*, Pt. 1. *Lep.* 208, 4.

New Holland.

Genus 25. AREAS.

Mas. et fœm. Corpus crassum, cylindricum. Proboscis capitatis latitudine longior. Palpi mediocriter longi, porrecti; articulus 2us 1o brevior; 3us parvus, 2i dimidio paullo brevior. Antennæ simplices. Thorax pilis adpressis. Abdomen alas posticas non superans. Tibiæ posticæ calcaribus quatuor sat longis. Alæ longæ, mediocriter latæ.

Male and fem. Body thick, cylindrical. Proboscis longer than the breadth of the head. Palpi moderately long, porrect; first joint longer than the second; third small, conical, nearly half the length of the second. Thorax with short and smooth-lying hairs. Abdomen extending as far as the hind wings. Legs stout; hind tibiæ with four moderately long spurs. Wings long, moderately broad; second inferior vein close to the first at the base; third full eight times nearer to the second than to the fourth.

1. AREAS ORIENTALIS.

Mas. et fœm. Alba; palpi rufi ex parte nigri; antennæ nigrae; thorax nigro-viridi univittatus et quadrimaculatus; abdomen rufum maculis dorsalibus nigro-viridibus, subtus luteum maculis lateralibus nigro-viridibus; alæ anticæ vittis duabus albo guttatis fuscis, 1a angulosa et furcata; 2a postica; posticæ testaceo-flavæ, maculis tribus fuscis.

Male and fem. White. Head red behind, and about the base of the antennæ. Proboscis tawny. Palpi red, partly black. Antennæ black. Prothorax with two blackish green spots, partly red behind and between the spots. Thorax with a blackish green stripe, and on each side with a blackish green dot. Abdomen bright red, with a row of dorsal blackish green spots; under side luteous, with blackish green spots along each side. Legs black; femora streaked with yellow or red. Fore wings with a brown angular forked brown

stripe, which extends from the costa before one-third of the length, shortly rejects a branch to the hind border near the base, joins the hind border beyond the middle, and then, forming an obtuse angle, extends forwards to the disk, and is thence prolonged in two forks to the costa; it contains a few white spots, as does also another brown stripe which proceeds along the hind border; under side testaceous-yellow, tinged with red towards the base; the stripes as above. Hind wings testaceous-yellow, with three brown spots; one in front, and two behind. Length of the body 10—13 lines; of the wings 28—42 lines.

Var. Fem. Hind wings with a subapical brown spot.

a. North India. From M. Deyrolle's collection.

b, c. North India. Presented by E. Doubleday, Esq.

Genus 26. THALAINA.

Mas. Corpus gracile. Caput et thorax pilosa. Proboscis mediocriter longa. Palpi brevissimi, porrecti; articulus 2us 10 multo longior; 3us conicus, minimus. Antennæ sat validæ, corporis dimidio longiores, subtus obtuse serratæ. Pedes graciles; tibiæ anticæ subtus dilatatæ; posticæ calcaribus quatuor longiusculis. Alæ latissimæ; anticæ subtrigonæ, apice vix hamatæ; posticæ abdomen paullo superans.

Thalaina, MSS.

Male. Body slender. Head and thorax hairy. Proboscis of moderate length. Palpi very short, porrect; second joint much longer than the first; third conical, very small. Antennæ rather stout, more than half the length of the body, obtusely serrated beneath. Wings very broad. Fore wings subtriangular, hardly hooked at the tips; fore border almost straight; outer border slightly oblique; three inferior veins, the third about twice further from the second than the second is from the first. Hind wings extending a little beyond the abdomen. Legs slender; fore tibiæ dilated beneath; hind tibiæ with four rather long spurs.

This genus recedes very far from the typical forms of *Arctiidae*, and approaches some of the *Noctuities*, and also *Platypteryx*, to which the two following genera are still nearer allied.

A. Alæ anticæ rufo strigatæ.

A. Alæ anticæ fascia una aut nulla rufa. - Klenæa, *MSS.*

B. Alæ anticæ fasciis duabus vitta connexis rufis. clara, *Walk.*

B. Alæ anticæ fusco strigatæ. - - - inscripta, *Walk.*

1. THALAINA KLENÆA.

Argenteo-alba; caput nigrum, vertice rufa, facie alba; palpi et antennæ nigra; thorax rufo bimaculatus; alæ anticæ vittis duabus fasciæque una rufis nigro marginatis, posticæ macula postica nigra, hac subtus majore partimque rufa.

Thalaina Klenæa, MSS.

White. Head black; vertex red; face mostly white. Palpi and antennæ black. Proboscis tawny. Thorax with a slight testaceous tinge in front; a red spot on each side. Wings bright silvery-white. Fore wings with a red black-bordered stripe along one-third of the fore border, and with another along two-thirds of the hind border, the two connected at the tips by an oblique band of the same colour; fringe red along the tips. Hind wings above with a black spot near the hind border, not half so large as a corresponding spot below, which is partly red. Length of the body 6—8 lines; of the wings 19—22 lines.

- a. New Holland. Presented by the late Earl of Derby.
- b. Van Dieman's Land. Presented by E. Doubleday, Esq.
- c. New Holland. From M. Becker's collection.

2. THALAINA CLARA.

Argenteo-alba; vertex rufa; palpi et antennæ fusca; thorax rufo varius; alæ anticæ marginibus fasciis duabus obliquis vittæque obliqua rufis nigro marginatis; posticæ macula subapicali fusca subtus ex parte rufa.

Thalaina Klenæa, Var. ?

White. Vertex red. Proboscis tawny. Palpi and antennæ brown. Front of the thorax with red hairs above, and with brown hairs on each side; a tuft of red hairs at the base of each fore wing. Wings silvery white. Fore wings with the outer border, the hind border, two oblique bands and an intermediate oblique stripe black-bordered red, as is also the costa as far as the first band; the stripe extends from before the middle of the first band to the hind end of the second. Hind wings with a subapical brown spot, which on the under side is larger, and is partly covered by a red spot. Length of the body 6 lines; of the wings 16 lines.

- a. Australia. From Mr. Cuming's collection.

In the single oblique band of the fore wings which distinguishes the male of *T. Klenæa*, there is occasionally a slight dilatation which corresponds with the stripe of *T. clara*, but the outer band is wholly wanting in the former.

3. THALAINA INSCRIPTA.

Argenteo-alba ; vertex pallide fusca ; antennæ fulvæ ; alæ anticæ margine postico fasciis duabus obliquis vittaque intermedia obliqua maculisque subapicalibus pallide fuscis ; posticæ macula fusca subapicali.

Silvery white. Vertex pale brown. Proboscis and antennæ tawny. Fore wings with the hind border, two oblique bands and an intermediate oblique stripe, and a row of spots along the outer border, pale brown ; the stripe along the hind border is forked towards the base, and the outer band is angular. Hind wings with a brown subapical spot, which is largest on the under side. Length of the body 5—6 lines ; of the wings 14—16 lines.

a. Van Dieman's Land. Presented by J. G. Children, Esq.

b—d. Van Dieman's Land. From Mr. A. J. Smith's collection.

Genus 27. AMANA.

Corpus gracile. Caput et thorax pilosa. Proboscis mediocriter longa. Palpi hirti, capite non longiores ; articulus 3us conicus, minimus. Antennæ validæ, setacæ, simplices, subtus subpubescentes. Abdomen thorace multo gracilius. Pedes pilosi ; tibiæ posticæ calcaribus quatuor robustis. Alæ latissimæ ; anticæ triangulares ; posticæ abdomen longe superans.

Body slender. Head and thorax hairy. Proboscis moderately long. Palpi hairy, not extending beyond the head ; third joint conical, very minute. Antennæ stout, setaceous, simple, very minutely pubescent beneath. Abdomen much more slender than the thorax. Wings very broad. Fore wings triangular ; fore border slightly convex ; outer border oblique ; first superior vein simple, second forked near the base ; third forked near the tip, as far from the second as the second is from the first ; first inferior vein nearer to the second than the second is to the third. Hind wings extending far beyond the abdomen. Legs hairy ; hind tibiæ with four stout spurs, two apical and two subapical.

1. AMANA ANGULIFERA.

Nigro-fusca; pectus et abdomen subtus lutea; alæ anticæ fasciis tribus flavis apud angulum posticum contiguas, 1a 3aque submarginalibus, 2a discali latiore; posticæ flavo interrupte marginatæ; pedes lutei.

Blackish brown. Body mostly luteous beneath. Fore wings with three yellow bands which are almost connected on the hind angle; the first straight, near and parallel to the hind border; the third near, but not parallel to the outer border, slightly undulating near the tips of the wings; the second broader, very slightly oblique. Hind wings with an interrupted and dotted luteous hind border. Legs luteous; fore legs mostly brown. Length of the body 7—8 lines; of the wings 22—24 lines.

a. ———? From Mr. Stevens' collection.

Genus 28. NUMENES.

Mas. Corpus sat gracile. Caput et thorax hirta. Proboscis brevissima. Palpi hirti, validi, porrecti; articulus 2us 1o multo longior; 3us conicus, minimus. Antennæ sat late pectinatæ, corporis dimidio paullo breviores. Thoracis latera fasciculata. Pedes sat robusti; tibiæ posticæ calcaribus quatuor longiusculis. Alæ latissimæ, anticæ subtrigonæ, apice vix hamatæ; posticæ abdomen longe superantes. Pedes sat validi; tibiæ posticæ calcaribus quatuor longiusculis.

Male. Body rather slender. Head and thorax hairy. Proboscis extremely short. Palpi hairy, stout, porrect; second joint much longer than the first; third conical, very small. Antennæ rather deeply pectinated, somewhat less than half the length of the body. Thorax with two lateral tufts of stout bristles, among which there are a few long hairs. Wings very broad. Fore wings subtriangular, hardly hooked at the tips; fore border convex; outer border oblique; second inferior vein as far from the first as from the third; fourth about six times further from the third than the third is from the second. Hind wings extending far beyond the abdomen. Legs rather stout; fore tibiæ with a thick tuft of stout bristles on the outer side; hind tibiæ with four rather long spurs.

1. NUMENES SILETTI.

Mas. *Testacea; caput et thorax nigro-fusca; abdomen basi fusco vittatum; pedes antice fusci; alæ anticæ basi, margine postico fasciisque duabus nigro-fuscis; posticæ striga postica fusca.*

Bombyx Siletti, MSS.

Testaceous. Head, palpi and thorax brownish black. Antennæ brown. Hind part of thorax with a tuft of testaceous hairs on each side. Abdomen with a short brown stripe at the base. Fore legs brown; fore tibiæ deeply fringed with brown hairs. Fore wings blackish brown at the base and along the hind border to the tips, and with two oblique blackish brown bands, one before one-third, the other before two-thirds, of the length. Hind wings brighter than the fore wings, with a brown streak on the hind border. Length of the body 6—7 lines; of the wings 22—24 lines.

a, b. Silhet. Presented by E. Doubleday, Esq.

c, d. Silhet. From the Rev. J. Stainforth's collection.

e. Java. From the East India Company's collection.

Genus 29. SPILOSOMA.

Palpi breves, subascendentes; articuli 1us et 2us pilosissimi, 1us 2o paullo longior, 3us squamosus, sat parvus, ovatus, subconicus. Maxillæ distinctæ, breves. Antennæ *maris* subbipectinatæ, *fœminæ* serratæ. Corpus robustum, maculatum. Alæ deflexæ, opacæ. Pedes sat validi; tibiæ anticæ breves, intus spina armatæ, posteriores apice calcaratæ.

Spilosoma, *Steph. Ill. Brit. Ent. Haust.* ii. 74; *Curt.*

Phalæna-Bombyx, p., *Linn.*; *Barbut*; *Gmel.*; *Stew.*; *Turt.*

Phalæna, p., *Deg.*; *Marsham*; *Wilkes*; *Harr.*; *Donov.*

Arctia, p., *Schr.*; *Leach*; *Meig.*; *Boisd.*

Bombyx, p., *Fabr.*; *Oliv.*; *Esp.*; *Borkh.*; *Hübner*; *Haw.*

Estigmene, p., *Hübner*.

Europe.

A. Alæ lutescentes, *fœminæ* pallidiore. - lubricipeda, *Linn*

B. Alæ niveæ.

A. Alæ anticæ punctis numerosis nigris. - - Menthastri, *Fabr.*

B. Alæ anticæ punctis duobus nigris. - - Papyratia, *Marsh.*

1. SPILOSOMA MENTHASTRI.

Alæ anticæ albæ aut pallide ochraceæ, punctis numerosis sparsis, lineolisque apicis atris; posticæ subtus lunula media nigra.

Spilosoma Menthastri, Steph. *Ill. Brit. Ent. Haust.* ii. 75, 1, pl. 11, f. 3. Westw. & Humph. *Brit. Moths*, i. 91, pl. 18, f. 12—14. Herr.-Schæff. *Samml. Eur. Schmett. Suppl.* ii. Text, 143, 10, 3. Speyer, *Ent. Zeit. Stett.* xiii. 314, 21.

Phalæna-Bombyx lubricipeda (fœm.), Linn. *Syst. Nat.* ii. 829, 69; *Faun. Suec.* ed. 2, 303, 1138. Gmel. *ed. Syst. Nat.* iv. 2434.

———, *List. Goëd.* (Angl.) 88, f. 76; (Lat.) 213, f. 96. Albin, *Nat. Hist. Engl. Ins.* pl. 24, f. g—k. Roes. *Ins.* i. pl. 46.

Phalæna erminea, Marsham, Linn. *Trans.* i. 70, pl. 1, f. 1. Stew. *El.* ii. 154. Turt. *Syst. Nat.* iii. 214.

Phalæna lubricipeda, Scopoli, *Ent. Carn.* 208, 513. Wilkes, 20, pl. 40; Harr. *Aur.* pl. 38, f. k, l. Hufnagel, *Berl. Mag.* ii. 4, 412, 25. *Naturf.* viii. 104, 25, 26.

Bombyx Menthastri, Fabr. *Ent. Syst.* iii. 452, 140. Wien. *Verz.* 54, 2. Schr. *Faun. Boic.* ii. 1, 263, 1442. Borkh. *Schmett.* iii. 226, 70. Oliv. *Enc. Méth.* v. 76, 176. Esp. *Schmett.* iii. pl. 66, f. 6—10. Hübn. *Bomb.* pl. 35, f. 152, 153. *Larv. Lep.* iii. *Bomb.* ii. *Veræ.* 2, b, f. 1. Treits. *Hulfsb. Schmett.* 227, 109. Illig. *N. Ausg. dess.* i. 92, 2; *Mag.* ii. 47. Schæff. *Nom. Panz.* 122, 177. Müll. *Faun. Fridr.* 42, 374. *Zool. Dan.* 119, 1375. Vieweg, *Tab. Verz.* i. 60, 61. Lang. *Verz.* ii. 94, 731, 732. Schwarz. *Raup.* 674.

Bombyx erminea, Mag. des *Thierr.* i. 1, 5, pl. 1, f. 1.

Bombyx mendica (fœm.), Rossi, *Faun Etr.* ii. 174, 1093. Ed. Illig. 278, 1093.

Phalæna erminea, Marsh, Linn. *Trans.* i. 70, pl. 1, f. 1.

Bombyx ermineus, Haw. *Lep. Brit.* 111.

Estigmene Menthastri, Hübn. *Verz. Schmett.* (*Phalæna Veræ Hypercompæ Pallidæ*) 184, 1892.

Chelonia Menthastri, God. *Pap. de France*, iv. 362, pl. 37, f. 5. Ramb. *Faun. Cors.*

Arctia Menthastri, Schr. *Faun. Boic.* ii. 263, 2153, 14. Meig. *Handb.* 145, 106; *Syst. Besch. Eur. Schmett.* iii. 36, 20, pl. 85, f. 9. Latr. *Gen. Crust. et Ins.* Koch, *Raup. und Schmett. Witten. Isis* (1848) 534.

Eyprepia Menthastri, Ochs. *Schmett. Eur.* iv. 354, 28.

Euprepia Menthastri, Costa, *Faun. Metzner, Ent. Zeit. Stett.* viii. 124.

Var. *Spilosoma Walkerii*, Curt. *Brit. Ent.* ii. pl. 92.

Var. *Thorax flavescens* ; *abdomen lutescens, punctis nigris quinque-seriatis* ; *alæ angustiores, anticæ maculis 14 triangularibus inæqualibus, posticæ duabus.*

Spilosoma rivularis, *Ménétriés, Catal. Zool. Caucase. Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text, 143, 9, 2.*

Arctia rivularis, *Boisd. Ind. Méth. Eur. Lep. 65, 531.*

a, b. England. Presented by E. Doubleday, Esq.

c. England. From Mr. Foxcroft's collection.

d—w. England. From Mr. Stevens' collection.

x—z. England.

aa—bb. Europe. From M. Becker's collection.

2. SPILOSOMA PAPYRATIA.

Alæ albæ ; anticæ punctis discalibus lineolaque punctorum nigrorum ad apicem nigris ; posticæ sæpissime immaculatæ.

Var. *Alæ anticæ punctis duobus, posticæ unico, subtus nullis.*

Spilosoma Papyratia, *Steph. Ill. Brit. Ent. Haust. ii. 76, 3. Cat. Brit. Lep. 54, 2.*

Spilosoma Urticæ, *Steph. Ill. Brit. Ent. Haust. ii. 76, 2. Herr.-Schæff. Samml. Eur. Schmett. Suppl. ii. Text, 143, 11, 4. Speyer, Ent. Zeit. Stett. xiii. 315, 22.*

Estigmene Urticæ, *Hübner. Verz. Schmett. 184, 1893. Geoffr. Hist. Ins. ii. 118, 21. Roes. Ins. i. 257, pl. 46, f. 1. Schæff. Icon. pl. 114, f. 2, 3 ; pl. 203, f. 1, 2. Frisch. iii. 22, xi. 2, pl. 8. Pap. d' Eur. iv. 162, pl. 158, f. 204 ; pl. 158, f. 204. Deg. Ins. i. 1, 5, 132, pl. 11, f. 1—8 ; 218, 3. Albin, Nat. Hist. Engl. Ins. pl. 21, f. 30, e—h.*

Phalæna Papyratia, *Marsham, Linn. Trans. i. 72, pl. 1, f. 4. Stew. El. ii. 155. Turt. Syst. Nat. iii. 214. Don. Nat. Hist. Brit. Ins. xvi. pl. 571.*

Bombyx Papyratus, *Haw. Lep. Brit. 112.*

Bombyx Papyracea, *Mag. des Thierr. i. 1, 9, pl. 1, f. 4.*

Bombyx Urticæ, *Haw. Ent. Trans. i. 366. Lep. Brit. 144. Esp. Schmett. iii. 20, pl. 83, f. 2. Hübner. Bomb. pl. 35, f. 154 ; Larv. Lep. iii. Bomb. 2. Veræ. 2, b, f, b, c. Treits. Hulfsb. Schmett. 227, 110.*

Chelonia Urticæ, *God. Pap. de France, iv. 365, pl. 37, f. 7.*

Arctia Urticæ, *Meig. Handb. 145, 107, Syst. Beschr. Eur. Schmett, iii. 37, 21, pl. 85, f. 10. Koch, Raup. und Schmett. Witter. Ins. (1848) 533.*

Bombyx Menthastri, *var. β, Illig. N. Ausg. des Wien. Verz. i. 93 ; Mag. ii. 47, 48. Borkh. Rhein. Mag. i. 343.*

Eyprepia Urticæ, *Ochs. Schmett. Eur.* iv. 357, 29.

Euprepia Urticæ, *Metzner, Ent. Zeit. Stett.* viii. 124.

a—g. England. From Mr. Stephens' collection.

h—k. England.

l, m. Europe. From M. Becker's collection.

3. SPILOSOMA LUBRICIPEDA.

Alæ flavescentes; anticæ striga obliqua fracta punctorum nigrorum; thorax et anus lutei.

Spilosoma lubricipeda, *Steph. Ill. Brit. Ent. Haust.* ii. 77, 4. *Westw. & Humph. Moths.* i. 92, pl. 18, f. 17—19. *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. Text, 143, 8, 1. *Speyer, Ent. Zeit. Stett.* xiii. 314, 20.

Phalæna-Bombyx lubricipeda, *Linn. Syst. Nat.* ii. 839; *Faun. Suec.* 1138. *Barbut, Gen.* pl. 10, f. 69. *Gmel. ed. Syst. Nat.* i. 5, 24, 34, 69. *Berk. Syn.* i. 138. *Marsham, Linn. Trans.* i. 71, pl. 1, f. 2. *Stew. El.* ii. 155. *Turt. Syst. Nat.* iii. 214. *Don. Hist. Nat. Brit. Ins.* xvi. pl. 568.

————— *List. Goed. (Angl.)* 87, f. 93; (*Lat.*) 210, f. 93. *Albin, Nat. Hist. Eng. Ins.* pl. 24, f. 25, a—e. *Wilkes, Nat. Hist.* pl. 41. *Harr. Aur.* pl. 17, f. g—i. *Röes. Ins.* i. pl. 47, *Deg.* i. 132, pl. 11, f. 1. *Schæff. Icon.* pl. 24, f. 8, 9. *Frisch. Besch. Ins.* iii. 21, xi. 2, pl. 8. *Sepp. Nederl. Ins.* ii. pl. 2, f. 1—11. *Mag. der Theirr.* i. 1, 6, pl. 1, f. 2. *Pap. de France*, iv. 159, pl. 157, f. 203, a—g. *Naturf.* viii. 104, 25, 26.

Phalæna Lepus, *Retz. Gen.* 37, 47.

Phalæna lubricipeda, *Wilkes*, pl. 21, f. 43. *Hufnagel, Berl. Mag.* ii. 4, 412, 26, pl.

Bombyx lubricipedatus, *Haw. Lep. Brit.* 110.

Estigmene lubricipeda, *Hüb. Verz. Schmett.* 1895, 184.

Bombyx lubricipeda, *Fabr. Ent. Syst.* iii. 1, 451, 138. *Oliv. Enc. Méth.* v. 75, 175. *Wien. Verz.* 54, F. 1. *Borkh. Schmett.* iii. 222, 69. *Rhein. Mag.* i. 342, 182. *Illig. N. Ausg. dess.* i. 91, 1; *Mag.* ii. 47. *Schæff. Nomencl. Panz.* 37. *Esp. Schmett.* iii. pl. 66, f. 1—5. *Fuessl. Schw. Ins.* 36, 681, *A. Mag.* ii. 1, 7. *Hüb. Bomb.* pl. 35, f. 155, 156. *Larv. Lep.* iii. *Bomb.* ii. *Veræ.* 2, d, f. d, e. *Vieweg, Tab. Verz.* i. 59, 60. *Rossi, Faun. Etr.* ii. 173, 1090; *Ed. Illig.* 277, 1090. *Lang. Verz.* ii. 94, 727, 730. *Brahm, Ins. Kal.* 377, 253. *Schwarz, Raup.* 240, 385, 529. *Treits. Hulfsb. Schmett.* 228, 111.

Chelonia lubricipeda, *God. Pap. de France*, iv. 358, pl. 37, f. 3.

Eyprepia lubricipeda, *Ochs. Schmett.* iii. 358, 30; iv. 61, 32.

Arctia lubricipeda, *Schr. Faun. Boic.* ii. 1, 264, 1443; 2, 153, 15, *Meig. Handb.* 145, 108; *Syst. Besch. Eur. Schm.* iii. 37. 22, pl. 85, f. 8. *Latr. Gen. Cr. et Ins. Koch, Raup. und Schm.* *Witter. Isis* (1848), 532. *Vieweg, Tab. Verz.* i. 59, 60. *Rossi, Faun. Etr.* ii. 173, 1090; *Ed. Illig.* 277, 1090. *Lang. Verz.* ii. 94, 727, 730. *Brahm, Ins. Kal.* 377, 253. *Schwarz, Raup.* 240, 385, 529.

Var. *Alæ anticæ nigræ macula magna lobata variisque flavican-*
tibus.

Bombyx radiatus, *Haw. Ent. Trans.* i. 336.

Spilosoma radiata, *Steph. Ill. Brit. Ent. Haust.* ii. 77, 5. *Westw. and Humph. Moths.* i. 92, pl. 18, f. 19.

Var. *Bombyx Luxerii*, *God. Pap. de France*, iv. 360, pl. 37, f. 4.

Arctia Luxerii, *Meig. Syst. Besch. Eur. Schm.* iii. 38, 23, pl. 85, f. 7.

a, b. England. Presented by E. Doubleday, Esq.

c—t. England. From Mr. Stephens' collection.

v—bb. England.

cc—dd. Europe. From M. Becker's collection.

North America.

A. *Alæ anticæ albæ.*

A. Abdomen maculis dorsalibus nigris.

A. *Alæ posticæ maris fulvæ.* - - - *Acrea, Drury.*

B. *Alæ posticæ maris albæ.*

a. *Alæ anticæ venis nigro marginatis.* - *Echo, Abbot.*

b. *Alæ anticæ venis non marginatis.* - *Virginica, Fabr.*

B. Abdomen non maculatum.

A. *Alæ sat angustæ.* - - - *Cunea, Drury.*

B. *Alæ latæ.* - - - *congrua, Walk.*

B. *Alæ anticæ subcinereæ.* - - - *Egle, Drury.*

4. SPILOSOMA ACREA.

Alæ niveæ (posticæ maris fulvæ), punctis nigris, costalibus majoribus; abdominis dorsum fulvum, nigro maculatum.

Spilosoma Acrea, *Westw. Ed. Drury*, i. 7, pl. 3, f. 2, 3.

Fæm. Phalæna (Bombyx) Acrea, *Drury, Ins. Exot.* i. 7, pl. 3, f. 2. *App.* ii.

Mas. Phalæna (Bombyx) Caprotina, *Drury, Ins. Exot.* i. 7, pl. 3, f. 3. *App.* ii.

Phalæna Caprotina, *Cram. Pap. Exot.* iii. 170, pl. 287, f. C.

Bombyx Acria, *Fabr. Ent. Syst.* iii. 1, 451, 137. *Abbot & Smith, Nat. Hist. Lep. Ins. Georg.* 133, pl. 67.

Arctia Pseuderminea (*Peck*), *Harris, Ins. Massachus. Agricult. Repos.* vii. 328, pl. . *The Natural History of the Salt Marsh Caterpillar.*

Estigmene Acria, *Hübner. Samml. Exot. Schmett.* ii. *Lep.* iii. *Phalænæ*, ii. *Veræ*, ix. *Hypercompæ*, *B. Pallidæ*, 2, f. 1—4; *Verz. Schmett.* 184, 1891.

a—d. Trenton Falls, New York. Presented by E. Doubleday, Esq.

e—g. United States. From Mr. Milne's collection.

h. Massachusetts. From Prof. Sheppard's collection.

i. United States.

5. SPILOSOMA ECHO.

Alæ niveæ, venis utrinque nigro marginatis; abdomen luteum nigroque maculatum.

Phalæna Echo, *Abbot & Smith, Nat. Hist. Lep. Ins. Georgia*, ii. 135, pl. 68.

Estigmene Echo, *Hübner. Verz. Schmett.* 184, 1897.

Georgia.

6. SPILOSOMA VIRGINICA.

Alba; abdomen e guttis nigris trivittatum, lateribus luteis; pedes antici nigro luteoque varii; alæ nonnunquam guttis paucissimis nigris.

Bombyx Virginica, *Fabr.*

Var. α. Wings wholly white.

Var. β. Fore wings with one black dot.

Var. γ. Fore wings with one black dot; hind wings with two black dots.

Var. δ. Fore wings with two black dots; hind wings with two black dots.

Var. ε. Fore wings with three black dots; hind wings with three black dots.

a—e. Trenton Falls, New York. Presented by E. Doubleday, Esq.

f, g, St. Martin's Falls, Albany River, Hudson's Bay. Presented by E. Doubleday, Esq.

h—j. Georgia. From Mr. Milne's collection.

k. Nova Scotia.

7. SPILOSOMA CUNEA.

Alæ albæ, anticæ maculis plurimis, posticæ duabus nigris; abdomen concolor, nigro maculatum.

Spilosoma Cunea, *Westw. Ed. Drury*, i. 34, pl. 18, f. 4.

Phalæna (Bombyx) *Cunea*, *Drury, Ins.* i. 36, pl. 18, f. 4. *App.* ii.

Phalæna punctatissima, *Abbot & Smith, Ins. Nat. Hist. Lep. Georg.* 139, pl. 70.

Cycnia Cunea, *Hübner. Verz. Schmett.* 184, 1902.

New York. Georgia. Virginia.

White. Abdomen yellowish, white on the hind borders of the segments and towards the tip, and with one dorsal, one ventral, and two lateral stripes of black spots. Fore wings with four irregular oblique macular more or less imperfect brown bands. *Female*.—Hind wings with some brown submarginal spots. Length of the body 5—6½ lines; of the wings 13—18 lines.

a—f. Georgia. From Mr. Milne's collection.

g, h. New York. From Mr. Milne's collection.

8. SPILOSOMA CONGRUA.

Alba; palpi supra nigri; pedes antici nigro luteoque varii. Mas.
—*Caput et thorax anticus subtestacea; alæ anticæ e guttis fuscis quadrisubfasciatæ.*

White. Tarsi with black bands. Fore coxæ and fore femora luteous, with black spots on the inner side; fore tibiæ striped with black on the inner side. *Male*.—Head and fore part of the thorax with a slight testaceous tinge. Fore wings with four oblique very imperfect and irregular bands, composed of pale brown dots. Length of the body 6—7 lines; of the wings 16—20 lines.

a—c. Georgia. From Mr. Milne's collection.

9. SPILOSOMA EGLE.

Alæ subcinereæ immaculata; abdomen luteum, maculis dorsalibus nigris.

Phalæna (Bombyx) *Egle*, *Drury, Ins. Exot.* ii. 36, pl. 20, f. 3. *App.* ii.

Spilosoma Egle, *Westw. Ed. Drury*, ii. 38, pl. 20, f. 3.

a. United States. Presented by E. Doubleday, Esq.

b, c. United States. From Mr. Milne's collection.

West Indies.

10. SPILOSOMA JUSSIÆÆ.

Alæ albæ; anticarum supra, posticarum subtus puncto medio nigro; femora antica et abdominis latera fulva; abdomen quintuplici serie punctorum notatum.

Arctia Jussîæ, *Poez, Cent. Lep. Cuba*, pl.

Cuba.

Larva feeds on the leaves of *Jussîæa erecta*.

Africa.

A. Alæ testaceæ.

A. Alæ anticæ nigro guttatæ. - - - testacea, *Walk.*

B. Alæ anticæ nigro bivittatæ. - - - lineæ, *Walk.*

C. Alæ anticæ nigro trivittatæ. - - - dorsalis, *Walk.*

D. Alæ anticæ fusca trifasciatæ. - - - curvilinea, *Walk.*

E. Alæ anticæ supra immaculatæ.

A. Abdomen non fasciatum. - - - submacula, *Walk.*

B. Abdomen nigro fasciatum. - - - lutescens, *Walk.*

B. Alæ nivæ anticæ fusco venosæ. - - - lineata, *Walk.*

C. Alæ anticæ albæ, nigro univittatæ et maculatæ.

punctivitta, *Walk.*

D. Alæ anticæ albæ, nigro trivittatæ. - - - trivitta, *Walk.*

E. Alæ totæ albæ. - - - innotata, *Walk.*

11. SPILOSOMA TESTACEA.

Mas. *Testacea; palpi antennæque nigra; thorax nigro biguttatus; abdomen luteum, fasciis abbreviatis nigris; pedes supra tarsisque toti nigra; alæ anticæ guttis quatuor discalibus unaque basali nigris; posticæ gutta fusca discali.*

Male. Pale testaceous. Palpi and antennæ black. Thorax with a black dot on each side. Abdomen above luteous, with a short black band on each segment. Femora and tibiæ above and tarsi black. Fore wings with a few black dots in the disk, and one at the base. Hind wings with a brown discal dot, sometimes almost obsolete above, more apparent beneath, where there is another brown dot near the hind border. Length of the body 6—7 lines; of the wings 15—17 lines.

a. Port Natal. From M. Gueinzins' collection.

b. Zoolu Country, South Africa. Presented by G. F. Angas, Esq.

12. SPILOSOMA LINEA.

Testacea; palpi extus nigri; abdomen supra luteum, e guttis nigris trivittatum; femora supra lutea, apice nigra; alæ anticæ vittis duabus nigris, antica subfurcata.

Testaceous. Palpi black on the outer side. Antennæ black, partly with testaceous tomentum. Abdomen pale luteous above, with one dorsal and two lateral stripes of black dots. Femora luteous above, with black tips. Fore wings with a slender black discal stripe, extending along the hind border of the discal areolet, and very slightly forked along the inferior veins; a posterior submarginal indistinct and imperfect stripe. *Male*.—Paler than the female. Length of the body 5—6 lines; of the wings 14—17 lines.

a. West Africa. From Mr. Stevens' collection.

b, c. South Africa. From Mr. Argent's collection.

d. Port Natal. From M. Gueinzus' collection.

e. South Africa. Presented by Dr. A. Smith.

13. SPILOSOMA DORSALIS.

Mas. Testacea; antennæ nigræ; thorax fusco trivittatus; abdomen supra luteum, e guttis nigris trivittatum; alæ anticæ vittis tribus fuscis, 1a costali fusca bifurcata, 2a trifurcata, 3a simplici.

Male. Testaceous. Antennæ black, with testaceous tomentum. Thorax rather darker in front, with three brown stripes, the middle one broader and longer than the lateral pair. Abdomen pale luteous above, with three stripes of black dots. Fore wings with a brown interruptedly bifurcate stripe along the costa, with a trifurcate brown discal stripe, and with a simple brown stripe along the interior border. Length of the body 6 lines; of the wings 15 lines.

This may be a variety of the preceding species.

a. South Africa. From Mr. Argent's collection.

14. SPILOSOMA CURVILINEA.

Subtestaceo-albida; caput et abdomen luteum; palpi supra nigri; alæ anticæ fusco trifasciatæ, posticæ gutta fusca.

Whitish, with a very slight testaceous tinge. Head luteous. Palpi black, luteous beneath. Antennæ black, with white tomen-

tum. Abdomen luteous. Fore wings with three slender brown bands; the first very slightly undulating; the second and third deeply undulating, especially the second; both rather broader towards each end. Hind wings with a brown anterior dot. Wings beneath luteous along the costa. Length of the body 5—6 lines; of the wings 12—14 lines.

a, b. Congo. Presented by Sir J. Richardson.

15. SPILOSOMA SUBMACULA.

Fœm. *Pallide testacea; palpi supra rufi, apice nigri; thorax nigro biguttatus; abdomen basi rufo hirtum; alæ anticæ subtus posticæque supra gutta discali nigra.*

Female. Pale testaceous. Palpi red above, black towards the tips. Antennæ black, with testaceous tomentum. Thorax with a black dot on each side. Abdomen with red hairs towards the base. Coxæ and femora red above; femora with black tips; tarsi with black bands; fore tibiæ black above. Fore wings tinged with red along the costa beneath; a black spot beneath at the tip of the discal areolet. Hind wings red along the interior border, with a black spot at the tip of the discal areolet. Length of the body 7 lines; of the wings 20 lines.

a. Port Natal. From M. Gueinzus' collection.

16. SPILOSOMA LUTESCENS.

Mas et fœm. *Testacea; caput luteo fasciatum; thorax luteo fasciatus et bivittatus; abdomen fasciis dorsalibus guttisque lateralibus nigris; tarsi fusci; alæ innotatæ.*

Male and female. Testaceous. Head with a luteous hind band. Thorax with a luteous band in front of the fore wings, and with two indistinct luteous stripes. Abdomen with black dorsal bands, and with two lateral rows of black dots. Tarsi brown. Wings wholly testaceous. Length of the body 6—7 lines; of the wings 16—20 lines.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan.

c. South Africa. Presented by Dr. A. Smith.

17. SPILOSOMA LINEATA.

Nivea; caput postice et thoracis latera subtestacea; palpi testacei, supra nigri; antennæ nigræ; abdomen supra luteum, e maculis nigris trivittatum; pedes nigro vittati, coxis femoribusque luteo vittatis, tarsis nigris; alæ anticæ fusco venosæ.

Male and female. Pure white. Hind part of the head and sides of the thorax slightly testaceous. Palpi testaceous, black above. Antennæ black. Abdomen luteous above, with three rows of black spots. Legs with black stripes; coxæ and femora with luteous stripes; tarsi black. Fore wings with brown veins. Length of the body 6—7 lines; of the wings 17 lines.

Var. β. Hind wings with a testaceous stripe [along the inner border.

a—c. Port Natal. From M. Becker's collection.

18. SPILOSOMA? PUNCTIVITTA.

Fœm. *Alba; palpi fusci, subtus albid; antennæ nigræ; abdomen supra rufum, e maculis nigris univittatum; pedes nigricantes, femoribus supra luteis apice nigris; alæ anticæ vitta discali gracili maculisque subapicalibus nigris; posticæ albæ.*

Female. White, with a slight testaceous tinge. Palpi brown, whitish beneath. Antennæ black, white beneath. Pectus with brown hairs. Abdomen above bright red, with a row of black spots. Legs blackish, femora above luteous, with black tips. Fore wings with a slender black discal stripe for half the length from the base, and with five or six black dots beyond. Hind wings white. Length of the body 6—7 lines; of the wings 15—16 lines.

a. Port Natal. From M. Gueinzus' collection.

19. SPILOSOMA? TRIVITTA.

Mas et fœm. *Albida; palpi fusci, subtus testacei; antennæ nigræ; thorax nigro trivittatus; abdomen supra luteum basi album, apice e maculis nigris trivittatum, subtus nigro bivittatum; pedes nigri, femoribus tibiisque albo vittatis, femoribus supra luteis; alæ anticæ nigro trivittatæ; posticæ albæ.*

Male and female. White. Palpi brown, testaceous beneath. Antennæ black, testaceous at the base. Thorax and fore wings with a slight testaceous tinge. Thorax with three black stripes. Abdomen above luteous, white at the base, and at the tip with three rows of black spots; under side with two black stripes. Legs black; femora luteous above, with black tips; femora and tibiæ with white stripes. Fore wings with three black stripes; the first and the third obsolete towards the base. Hind wings white. Length of the body 6 lines; of the wings 16—18 lines.

a, b. Port Natal. From M. Gueinzus' collection.

20. SPILOSOMA INNOTATA.

Mas. *Alba*; *palpi testacei*; *pedes graciles*; *alæ immaculatæ*.

Male. White. Palpi testaceous. Antennæ with white tomentum. Legs slender. Wings wholly white. Length of the body 5 lines; of the wings 16 lines.

a. Egypt. Presented by J. Burton, Esq.

Asia.

A. Alæ anticæ flavescentes.

A. Alæ anticæ maculis duabus punctisque nigris. Indica, *Guér.*

B. Alæ anticæ guttis nonnullis nigris.

A. Abdomen supra rufum. - - - sublutea, *Walk.*

B. Abdomen supra luteum. - - - subfascia, *Walk.*

C. Alæ anticæ nigro quadriguttatæ et unimaculatæ.

transiens, *Walk.*

D. Alæ anticæ punctis geminatis nigris. - casigneta, *Kollar.*

E. Alæ anticæ fasciis tribus macularibus fuscis.

maculifascia, *Walk.*

F. Alæ anticæ fasciis duabus fuscis. - - rubescens, *Walk.*

G. Alæ anticæ luteæ, fusco costatæ. - costata, *Boisd.*

B. Alæ anticæ cervinæ. - - - suffusa, *Walk.*

C. Alæ anticæ albæ.

A. Alæ anticæ striis longitudinalibus nigris.

quadriramosa, *Kollar.*

B. Alæ anticæ puncto medio nigro. - - alba, *Bremer.*

C. Alæ anticæ gutta strigaeque subapicali nigris.

punctistriga, *Walk.*

D. Alæ anticæ guttis paucis nigris. - - bifrons, *Walk.*

E. Alæ anticæ totæ albæ.

A. Alæ posticæ punctis nigris. - - erythrozona, *Kollar.*

B. Alæ posticæ macula submarginali fusca. subcarnea, *Walk.*

21. SPILOSOMA INDICA.

Alæ; *caput et thorax albo-subflavescentia*; *alæ anticæ punctis minutissimis nigris, subtus macula media fasciæque subapicali fuscis*; *posticæ maculis duabus, costali et anali, nigris, subtus maculis tribus fuscis*; *abdomen supra flavum, subtus album, punctis lateralibus nigris*; *pedes albo fusci, femoribus supra rufis.*

Arctia Indica, *Guér. Voy. Delessert, Hist. Nat. 93.*

Neilgherry Mountains.

22. SPILOSOMA TRANSIENS.

Fœm. *Albida; palpi testacei, apice nigri; antennæ nigræ; abdomen supra luteum, e guttis nigris trivittatum; pedes nigro-luteoque vittati; alæ subtestaceæ, anticæ nigro quadriguttatæ et unimaculatæ, posticæ maculis submarginalibus nigris.*

Female. Whitish. Palpi testaceous, black towards the tips. Antennæ black. Abdomen luteous above, with three rows of black dots. Legs with black stripes; coxæ and femora with luteous stripes. Wings slightly testaceous. Fore wings with four black dots at the tip of the discal areolet, and with a black spot by the internal angle. Hind wings with a hind row of black submarginal spots. Length of the body 6—7 lines; of the wings 18—20 lines.

Var. β . Thorax with two testaceous stripes. Fore wings without the hind spot.

Var. γ like *var. β* . Thorax with one testaceous stripe. Hind wings without the hind spots.

a, b. North India. From Mr. Stevens' collection.

c, d. Silhet. From Mr. Sowerby's collection.

e. East Indies. From Archdeacon Clerk's collection.

f. Celebes. From Madame Ida Pfeiffer's collection.

23. SPILOSOMA QUADRIRAMOSA.

Alba; thorax nigro maculatus et vittatus; abdomen flavum nigro maculatum; alæ anticæ striis longitudinalibus, altera triramosa; altera simplici lineolisque ad marginem externum nigris; posticæ punctis tribus marginalibus ejusdem coloris.

Euprepia quadriramosa, Kollar, Kaschmir, von Von Hugel, 468, 6.
Himalaya Mountains.

24. SPILOSOMA ERYTHROZONA.

Alba; abdomen nigrum, rubro annulatum; alæ posticæ punctis aliquot obsoletis nigris.

Euprepia erythrozona, Kollar, Kaschmir, von Von Hugel. 468, 7.
Himalaya Mountains.

25. SPILOSOMA SUBCARNEA.

Fœm. *Albida; palpi supra rufi, apice nigri; abdomen supra rufum vittis tribus macularibus nigris, apice album; pedes rufo-nigroque varii; alæ posticæ macula submarginali fusca.*

Female. Whitish. Palpi red, with black tips, white beneath. Antennæ black, mostly white on each side. Abdomen bright red

above, excepting the tip, with one dorsal and two lateral stripes of black spots. Fore coxæ bright red, striped with black; femora with black tips, above bright red, which colour is most prevalent on the fore legs; anterior tibiæ and anterior tarsi black above; hind tarsi black, with a white band. Hind wings a little paler than the fore wings, with a brown posterior submarginal spot. Length of the body $7\frac{1}{2}$ lines; of the wings 24 lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

26. SPILOSOMA CASIGNETA.

Flavescens; abdomen rubrum nigro trifariam punctatum; alæ anticæ punctis numerosis geminatis, posticæ solitariis nigris.

Euprepia casigneta, Kollar, Kaschmir, von Von Hugel, 469, 8.

Himalaya Mountains.

27. SPILOSOMA ALBA.

Alba; antennæ nigræ; thorax punctis duobus nigris; abdomen supra sanguineum, superne et a latere punctis nigris albo annulatis; corpus subtus punctis lateralibus nigris; pedes sanguinei; alæ puncto mediano nigro.

Chelonia alba, Bremer und Grey, Beitr. zur Schmett. Fauna des Nordlichen China, ii. 15, 71.

North China.

28. SPILOSOMA PUNCTISTRIGA.

Fœm. Alba; palpi supra apice nigri; antennæ nigræ, basi rufæ; abdomen supra luteum, e guttis nigris trivittatum; pedes rufo-nigroque varii; alæ anticæ gutta discali strigaeque subapicali nigris, costa subtus rufa.

Female. White. Palpi black above towards the tips. Antennæ black, with white tomentum, red at the base. Abdomen luteous above, with three rows of black dots. Coxæ and femora with red stripes, the latter with black tips; tibiæ with black stripes. Fore wings with a black dot at the tip of the discal areolet, and with a black streak beyond in front of the first inferior vein; costa red beneath. Length of the body 4 lines; of the wings 11 lines.

a. North India. From Mr. Stevens' collection.

29. SPILOSOMA MACULIFASCIA.

Fœm. Testacea; antennæ nigræ; thorax fusco quadrimaculatus; pedes supra fuscescentes; alæ anticæ e maculis fuscis trifasciatae, posticæ albidæ maculis duabus posticis.

Female. Testaceous. Antennæ black. Thorax with two small dark brown spots on each side. Legs mostly brown above. Fore wings paler than the body, with three oblique bands of brown spots across the disk, and with a few more brown spots towards the base and towards the tip. Hind wings whitish, with two brown spots near the inner angle. Length of the body 7 lines; of the wings 20 lines.

a. Java. From the East India Company's collection.

30. SPILOSOMA RUBESCENS.

Testacea; palpi nigri; pectus rufescens; abdomen supra rufum, vittis guttularibus nigris; pedes rufi, tibiis tarsisque nigris; alæ anticæ fasciis duabus obliquis guttularibus indistinctis fuscis; posticæ maculis tribus submarginalibus unaque discali nigris.

Testaceous. Palpi black. Pectus with reddish hairs. Abdomen above red, with rows of black dots. Legs red; tibiæ and tarsi black. Fore wings with a few indistinct brown dots, arranged in two or three imperfect oblique bands, and sometimes quite obsolete. Hind wings red, with a black discal spot and three black posterior submarginal spots. Length of the body 6—7 lines; of the wings 16—20 lines.

a, b. East Indies. From Archdeacon Clerk's collection.

c. Borneo. From Mr. Low's collection.

31. SPILOSOMA COSTATA.

Abdomen punctis nigris serie triplici digestis; alæ quatuor luteæ; anticæ fusco costatæ.

Chelonia costata, Boisd. Voy. de l'Astrolabe, Pt. 1. Lep. 213, 1, pl. 5, f. 6.

Port Praslin, New Ireland.

32. SPILOSOMA SUFFUSA.

Cervina; palpi et antennæ nigra; abdomen supra rufum; pedes rufo-nigroque varii. Mas.—Abdomen nigro trivittatum; alæ anticæ fasciis duabus incompletis obliquis nigricantibus; posticæ gutta discali maculisque tribus submarginalibus nigris. Fæm.—Alæ anticæ subtus rufescentes, gutta subcostali nigra; posticæ guttis tribus nigricantibus albido marginatis.

Fawn-colour. Palpi and antennæ black. Abdomen red above. Coxæ and femora red above, streaked with black; tibiæ and tarsi

black above. *Male*.—Fore wings with two irregular and imperfect oblique blackish bands beyond the middle. Hind wings with a black discal dot and three black submarginal spots. Abdomen with three black stripes. *Female*.—Fore wings reddish beneath, with a middle subcostal black dot. Hind wings with three blackish whitish-bordered dots; two of them submarginal, the third discal, and most apparent beneath. Length of the body 6—8 lines; of the wings 16—22 lines.

a, b. Punjaub. Presented by Brigadier Hearsay.

Var. Fem. *Testacea; palpi nigri; abdomen supra rufum, e maculis nigris trivittatum; alæ anticæ guttis nonnullis nigris.*

Var. β . *Female*. Testaceous, with a slight luteous tinge. Palpi and antennæ black. Abdomen red above, with one dorsal and two lateral stripes of black spots. Fore wings with one basal, one posterior at one-fourth of the length, a few discal, and two or three submarginal black dots; the discal dots forming a very slight and oblique band.

Var. γ like var. β . Submarginal and discal spots wanting, with the exception of the two hindmost of the latter. Length of the body 7—8 lines; of the wings 20—24 lines.

a. Nepaul. Presented by Major-Gen. Hardwicke.

b. North India. Presented by E. Doubleday, Esq.

c. North Bengal. Presented by W. W. Saunders, Esq.

d. North India. Presented by Brigadier Hearsay.

33. SPILOSOMA SUBFASCIA.

Isabellina; palpi antennæque nigra; thorax fascia antica maculisque duabus nigris; abdomen supra luteum, e maculis nigris trivittatum; pedes nigro varii; alæ anticæ guttis costalibus, una subapicali unaque postica nigris; posticæ guttis posticis nigris. Mas.—*Alæ anticæ fascia obliqua maculari nigra; posticæ apud marginem luteæ fasciæque brevi nigra.*

Cream-colour. Palpi and antennæ black. Thorax with a black spot on each side, and with an indistinct testaceous band in front. Abdomen luteous above, with three rows of black spots. Tarsi, anterior tibiæ and fore femora above black; posterior femora and hind tibiæ with black tips. Fore wings with black costal dots, with one subapical dot, and with one posterior dot. Hind wings with some black dots by the internal angle. *Male*.—An oblique macular black band between the subapical and posterior dots; two dots near the tip of the exterior border. Hind wings luteous along

the internal border, with some black apical dots, and with a short black band by the internal angle. *Female*.—Abdomen thickly tufted with testaceous hairs at the tip. Length of the body 6—8 lines; of the wings 16—24 lines.

a, b. Ceylon. Presented by R. Templeton, Esq.

Australia.

34. SPILOSOMA OBLIQUA.

Mas. *Testacea; palpi et antennæ nigra; abdomen supra rufescens, e guttis nigris trivittatum; pedes nigri, femoribus rufis apice nigris; alæ anticæ e guttis nigris vix bifasciatæ, posticæ maculis quatuor nigris.* *Fœm.*—*Alba; caput subtus et abdomen supra rufa; alæ anticæ strigis duabus obliquis nigris.*

Male. Pale testaceous. Palpi and antennæ black. Abdomen above reddish, with three rows of black dots; under side with two rows of black dots. Legs black; femora red, with black tips, fringed beneath with white hairs; fore tibiæ beneath with a thick tuft of pale testaceous hairs. Fore wings with black dots, most of which form two much interrupted and very imperfect oblique bands. Hind wings with one anterior discal and three posterior submarginal black spots. *Female*.—White. Head bright red beneath. Abdomen above bright red. Tibiæ and tarsi white beneath. Fore wings with two oblique streaks extending from the costa to the disk, and at a right angle to the bands before mentioned. Like the male in other respects. Length of the body 5—7 lines; of the wings 14—22 lines.

a—c. Sydney. Presented by E. Doubleday, Esq.

d. New South Wales. From Mr. Wood's collection.

35. SPILOSOMA? FULVIA.

Alæ quatuor concolores fulvæ; anticæ punctis duobus nigris ad basim costæ, venis fuscis.

Bombyx Fulvia, Donovan. Epit. Ins. New Holl. Pl.

Chelonia Fulvia, Boisd. Voy. de l'Astrolabe, Pt. 1. Lep. 214, 2.

This species may belong to the genus *Aganais*.

New Holland.

Genus 30. CYCNIA.

Palpi distincti, mediocres, descendentes; articuli subæquales, cylindrici, 1us et 2us pilosissimi, 1us incurvus, 3us squamosus, obtusus, gracilior. Proboscis capite paullo longior. Antennæ *maris* bipectinatae, *fæm.* serratae. Thorax crassus, valde lanuginosus. Corpus maculatum. Alæ subdiaphanæ, squamis rarioribus adpersæ. Pedes breves, validi; tibiæ anticæ breves, spina intus armatae, posticæ apice calcaratae.

Cycnia, *Hübner. Verz. Schmett.* 184.

Phalæna Bombyx, p., *Linn.*; *Clerck*; *Gmel.*; *Marsham*; *Stew.*; *Turt.*; *Don.*

Bombyx, p., *Fabr.*; *Borkh.*; *Esp.*; *Hübner.*; *Haw.*; *Treits.*

Eyprepia, p., *Ochs.*

Arctia, p., *Schr.*; *Meig.*

Chelonia, p., *God.*

Diaphora, *Steph. Ill. Brit. Ent. Haust.* ii. 77.

Europe.

A. *Mas. cervino-cinereus.* *Fæm. alba.* - - mendica, *Linn.*

B. *Mas. nigro fuliginosus.*

A. Femora antica rosea. Alæ et ciliæ inter costas nigro maculatae. - - - - - luctuosa, *Freyer.*

B. Femora cinerea. Alæ anticæ strigis tribus transversis obscurioribus. - - - - - sordida, *Hübner.*

1. CYCNIA MENDICA.

Alæ atro punctatae, maris cinereae, fæminæ albæ; pedes antici lutei.

Cycnia mendica, *Hübner. Verz. Schmett.* 184, 1900. *Westw. & Humph.* i. 92, pl. 18, f. 20—22. *Steph. Cat. Brit. Lep.* 55.

Diaphora mendica, *Steph. Ill. Brit. Ent. Haust.* ii. 78, 1. *Wing, Trans. Ent. Soc.* v. 120, pl. 14, f. 5.

Phalæna (Bombyx) mendica, *Linn. Syst. Nat.* ii. 822, 1127. *Faun. Suec. Ed.* ii. 299, 1127. *Gmel. Ed. Syst. Nat.* i. 5, 2423, 47. *Clerck, Icon.* pl. 3, f. 5. *Marsh. Linn. Trans.* i. 72, pl. 1, f. 3. *Stew. Elem.* ii. 153. *Turt. Syst. Nat.* iii. 214. *Don. Nat. Hist. Brit. Ins.* xi. 77, pl. 388.

Bombyx mendica, *Fabr. Ent. Syst.* iii. 1, 452, 139. *Oliv. Enc. Méth.* v. 76, 177. *Wien. Verz.* 54, F. 3. *Borkh. Schmett.* iii.

229, 71. *Rhein. Mag.* i. 343, 185. *Esp. Schmett.* iii. pl. 42, f. 1—9. *Illig. N. Ausg. dess.* i. 93, 3. *Knoch, Beitr.* iii. 47, 6, pl. 2, f. 5—13. *Fuessl. Schw. Ins.* 35, 664. *Panz. Faun. Germ.* 46, 23, 24. *V. Müll. Faun. Siles.* iii. 1. *H. Naturf.* viii. 109, 45. *Vieweg, Tab. Verz.* i. 60, 62. *Rossi, Faun. Etr.* ii. 174, 1093; *Ed. Illig.* 278, 1093. *Lang. Verz.* ii. 94, 723—726. *Schwarz. Raup.* 378, 522, 713. *Ernst, Pap. de France*, iv. 165, pl. 159, f. 205 a—h. *Hübner. Bomb.* 140, 7, pl. 34, f. 148, 149. *Treits. Hulfsb. Schmett.* 226, 108.

Chelonia mendica, *God. Pap. de France*, iv. pl. 37, f. 1, 2.

Eyprepia mendica, *Ochs. Schmett.* iii. 351, 27; iv. 61, 28.

Arctia mendica, *Schr. Faun. Boic.* ii. 2, 153, 16. *Meig. Handb.* 144, 105; *Syst. Besch. Eur. Schmett.* iii. 36, 19, pl. 85, f. 6. *Koch, Raup. und Schmett. Witter. Isis* (1848) 535.

Phalæna murina, *Hufnagel, Pl. Berl. Mag.* ii. 4, 424, 45.

Bombyx mendicus, *Haw. Lep. Brit.* 112.

Spilosoma mendica, *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. *Text*, 143, 12, 5. *Speyer, Ent. Zeit. Stett.* xiii. 314, 19.

Var. Bombyx rustica, *Hübner. Bomb.* 150.

Cycnia egena, *Hübner. Verz. Schmett.* 184, 1901.

Spilosoma mendica, *var. rustica*, *Speyer, Ent. Zeit. Stett.* xiii. 314.

a—n. England. From Mr. Stephens' collection.

o—t. England.

v—x. Europe. From M. Becker's collection.

y. Europe. From Mr. Milne's collection.

z—aa. Europe.

2. CYCNIA LUCTUOSA.

Nigro-fuliginosa; *alæ et ciliæ inter costas nigro maculatæ*; *femora antica rosea.*

Bombyx (*Eyprepia*) *luctuosa*, *Fryer, Neuere Beitr. Schmett.* iii. 94, pl. 260.

Spilosoma luctuosa, *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. *Text*, 144, 13, 6.

a, b. Europe. From M. Becker's collection.

3. CYCNIA SORDIDA.

Mas. Nigro-fuliginosus; *fœm. cinerea*; *alæ anticæ strigis tribus transversis obscurioribus et lunula media inter ambas posteriores.*

Noctua semieana, *Esp. Noct.* 110, 5.

Cycnia sordida, *Hübner. Verz. Schmett.* 184, 1899.

Chelonia sordida, *Boisd. Icon. Hist. Lépid.* ii. 132, 6, pl. 60, f. 2—4.

Spilosoma sordida, *Herr.-Schæff. Samml. Eur. Schmett. Suppl.* ii. Text, 144, 7. *Speyer, Ent. Zeit. Stett.* xiii. 314, 18.

*Switzerland. North Italy.

North America.

4. CYCNIA DUBIA.

Fusca; thorax cervinus; abdomen e maculis nigris trivittatum; alæ fasciis duabus obliquis macularibus subobsoletis nigricantibus, anticæ albo venosæ.

Chelonia dubia, *Barnston MSS.*

Female. Pale brown. Antennæ and legs with whitish tomentum. Thorax fawn-colour, whitish behind. Abdomen somewhat ferruginous, with three stripes of black spots. Wings with two oblique incomplete indistinct brown bands, composed of blackish spots. Fore wings with whitish veins. Length of the body 5 lines; of the wings 16 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

Asia.

- | | | | | | |
|------------------------------|---|---|---|---|--------------------------|
| A. Alæ anticæ fuscæ. | - | - | - | - | punctivaga, <i>Walk.</i> |
| B. Alæ anticæ testaceæ. | - | - | - | - | testacea, <i>Walk.</i> |
| C. Alæ anticæ albido murinæ. | - | - | - | - | saucia, <i>Boisd.</i> |

5. CYCNIA PUNCTIVAGA.

Fœm. Fusco-testacea; palpi lutei, apice fuscis; alæ obscure fuscæ, anticæ nigro vittatæ, basi venisque testaceis, posticæ venis supra fuscis, subtus testaceis.

Female. Brownish testaceous. Proboscis testaceous. Palpi luteous, with dark brown tips. Wings dark brown. Fore wings testaceous towards the base; veins testaceous, strongly marked;

* CYCNIA BUDEA.

Cycnia Budea, *Hübner. Verz. Schmett.* 184, 1903.

CYCNIA TENERA.

Cycnia Tenera, *Hübner. Verz. Schmett.* 184, 1904.

five black spots towards the base, three at the tip and in front of the discal areolet, and an undulating band of black dots extending from the first superior vein to the hind border. Hind wings as dark as the fore wings, their veins dark brown above, testaceous beneath. Length of the body 5 lines; of the wings 14 lines.

a. Java. From the East India Company's collection.

6. CYCNIA TESTACEA.

Testacea; abdomen apice subtus luteum; alæ anticæ nigro quadrisignatæ.

Testaceous. Palpi and legs of the same colour. Abdomen luteous towards the tip beneath. Fore wings with two blackish marks adjoining the discal areolet, the first between the fourth and third inferior veins, the second between the third and second inferior veins; two contiguous blackish marks in front of half the length of the discal fold beyond the discal areolet. Length of the body 6 lines; of the wings 14 lines.

a. North India. From Mr. Stevens' collection.

7. CYCNIA? SAUCIA.

Thorax murinus, punctis nigris; abdomen albido-cinereum, basi anoque supra rubellis; alæ anticæ albido-murinæ subdiaphanæ, costa macula media apiceque fuscis; posticæ albido-submurinæ subdiaphanæ; pedes rubri.

Chelonia saucia, Boisd. Voy. de l'Astrolabe, Pt. 1. Lep. 214, 3.

New Guinea.

Genus 31. ALPHÆA.

Mas. Corpus mediocriter validum. Proboscis brevis. Palpi sat robusti, mediocriter longi; articulus 2us 1o valde longior; 3us conicus, minimus. Antennæ subpectinatæ. Abdomen alas posticas vix superans. Pedes sat graciles; tibiæ posticæ calcaribus duobus posticis mediocriter longis. Alæ latæ.

Male. Body moderately stout. Proboscis short. Palpi hairy, rather stout, moderately long; second joint very much longer than the first; third conical, very small. Antennæ minutely pectinated. Abdomen hardly extending beyond the hind wings. Legs rather slender; hind tibiæ with two moderately long apical spurs. Wings

broad. Fore wings rather narrower than the hind wings; first, second and third inferior veins almost contiguous at the base; fourth very remote.

1. ALPHÆA FULVO-HIRTA.

Mas. *Alba; caput antice nigrum; thorax maculis duabus anticis nigro-fuscis vittisque duabus nigris; abdomen supra fulvum, subtus e maculis fuscis trivittatum; pedes fuscis, albo varii, femoribus anticis luteo vittatis; alæ anticæ fuscae, albo maculatæ; posticæ fusco maculatæ.*

Male. White. Head black in front. Proboscis testaceous. Palpi and antennæ black. Thorax with testaceous hairs about the sutures and in front, with two elongated blackish brown spots in front, and with a black stripe on each side. Pectus thickly clothed with brown hairs. Abdomen above thickly clothed with tawny hairs; under side with three rows of brown spots. Legs brown; fore femora with a luteous stripe; fore tibiæ and fore tarsi with white dots beneath; middle femora with a white band. Fore wings brown, with numerous white spots, of which the largest are along the hind border, the most elongated along the fore border, and the smallest in the disk, where one of them is very slender and nearly rectangular. Hind wings with one discal and a few marginal and submarginal brown spots and dots. Length of the body 8 lines; of the wings 23 lines.

a. ———? From Mr. Stevens' collection.

Genus 32. AMPHISSA.

Mas. Corpus lineare, cylindricum, mediocriter longum et validum. Proboscis brevis. Palpi brevissimi; articulus 2us 10 longior; 3us minimus, acuminatus. Antennæ graciles, simplices. Thorax pilis adpressis. Abdomen alas paullo superans. Pedes graciles; tibiæ posticæ calcaribus parvis apicalibus. Alæ sat angustæ.

Male. Body linear, cylindrical, moderately long and stout. Proboscis short. Palpi very short; second joint longer than the first; third very minute, acuminated. Antennæ slender, simple. Thorax smooth, with flat-lying hairs. Abdomen extending for one-fourth of its length beyond the hind wings; anal appendages slender, curved. Legs slender; hind tibiæ with small apical spurs. Wings rather narrow. Fore wings straight in front; first inferior vein almost contiguous to the second; second and third united, and forming a very short petiole; fourth remote. Hind wings hardly convex in front.

1. AMPHISSA VACILLANS.

Alba ; palpi apice nigri ; antennæ nigræ ; abdomen supra luteum, e maculis nigris trivittatum, subtus pallide cinereo-fuscum vittis duabus macularibus nigris ; pedes fuscescentes, femoribus anticis supra luteis apice nigris ; alæ pallide cinereo-fuscae, anticæ basi et apud costam albidæ, posticæ fusco marginatæ.

White. Proboscis testaceous. Palpi with black tips. Antennæ black. Abdomen above luteous, with three rows of black spots; under side pale grayish brown, with a row of black spots along each side. Legs brownish; fore femora luteous above with black tips. Wings pale grayish brown. Fore wings whitish towards the base and along the costa. Hind wings brown along the inner border and the outer border. Length of the body 6 lines; of the wings 15 lines.

a. Hong Kong. From Mr. Harrington's collection.

Genus 33. LACYDES.

Corpus sat crassum. Proboscis brevis. Palpi longi, porrecti, graciles; articulus 2us 1o valde longior; 3us gracilis, 2i dimidio vix brevior. Tibiæ posticæ calcaribus quatuor parvis. Alæ mediocriter latæ. *Mas.*—Antennæ mediocriter pectinatæ. Abdomen alas posticas vix superans. *Fæm.*—Antennæ serratæ. Abdomen alas posticas distincte superans.

Body rather stout. Proboscis short. Palpi long, porrect, slender, extending beyond the head; second joint very much longer than the first; third nearly half the length of the second, slender, sublanceolate. Hind tibiæ with four small spurs. Wings of moderate breadth. Fore wings a little narrower than the hind wings; first and second inferior veins almost contiguous at the base, third about thrice further from the fourth than from the second. *Male.*—Antennæ moderately pectinated. Abdomen hardly extending beyond the hind wings. *Female.*—Antennæ serrated. Abdomen extending to some length beyond the hind wings.

1. LACYDES INTERCISA.

Alba ; palpi ex parte antennæque fusca ; abdomen supra fuscum, segmentis luteo fasciatis. Mas.—*Thorax testaceo varius ; alæ anticæ fasciis quatuor obliquis cervinis macularibus, posticæ maculis guttisque marginalibus cervinis. Fæm.*—*Thorax fusco varius ; alæ fusco fasciatæ et notatæ.*

Bombyx (*Eyprepia*) *intercisa*, *Freyer, Neuere Beitr. Schmett.* iv. 118, pl. 356. *Ent. Zeit. Stett.* ii. 90.

Chelonia intercissa, *Eversm. Faun. Lep. Volg. Ural.*

Chelonia spectabilis, *Tausch. Herr.-Schæff. Samml. Eur. Schmett.* ii. *Text, Suppl.* 145, 16, 2.

White. Palpi partly brown. Antennæ brown. Abdomen above brown, with a luteous band on the hind border of each segment. Tarsi slightly brownish beneath. *Male*.—Head partly testaceous above. Thorax testaceous in front and on each side. Fore wings with four oblique fawn-coloured macular bands. Hind wings with four submarginal fawn-coloured spots, and a row of marginal dots of the same colour. *Female*.—Head partly brown above. Thorax brown in front and on each side. Fore wings with four oblique brown macular bands, more irregular than those of the male. Hind wings with a brown irregular partly macular brown submarginal band; disk slightly streaked with brown; border with brown dots. Length of the body $4\frac{1}{2}$ —5 lines; of the wings 14—16 lines.

South Russia. Sarepta.

a, b. Europe. From M. Becker's collection.

Genus 34. ALPENUS.

Mas. Corpus sat gracile. Proboscis brevis. Palpi porrecti, mediocriter longi; articulus 2us 1o multo brevior; 3us conicus, 2i dimidio multo brevior. Antennæ serratæ. Abdomen alas posticas paullo superans. Pedes sat graciles; tibiæ posticæ calcaribus quatuor parvis. Alæ sat latæ.

Male. Body rather slender. Proboscis short. Palpi moderately long, porrect; second joint much longer than the first; third conical, much less than half the length of the second. Antennæ serrated. Abdomen extending for one-fourth of its length beyond the hind wings. Legs moderately slender; hind tibiæ with four small spurs. Wings moderately broad. Fore wings nearly as broad as the hind wings; first, second and third inferior veins nearly contiguous at the base; fourth remote.

1. ALPENUS ÆQUALIS.

Fœm. *Albus; palpi supra nigri; antennæ nigrae; thorax nigro sexguttatus; abdomen supra luteum, e guttis nigris trivittatum; tibiæ tarsique nigra, albo fasciata; alæ anticæ guttis plurimis nigris; posticæ gutta discali maculisque nonnullis submarginalibus nigris.*

Fem. White. Palpi black, white beneath. Antennæ black, white at the base. Thorax with three black dots on each side, four in front and two in the middle. Abdomen luteous above, with three rows of black dots; under side with two rows of black dots. Tibiæ and tarsi black, with white bands. Fore wings with numerous black dots of various size and shape, nearly equally disposed over the surface. Hind wings with a black discal dot, and with a few submarginal black spots. Length of the body 7 lines; of the wings 22 lines.

a. West Africa. From Mr. Stevens' collection.

Genus 35. ANTHEUA.

Mas. Corpus longum, robustum. Oculi magni. Proboscis capitis latitudine æqualis. Palpi breviusculi, oblique ascendentes; articulus 2us 1o multo longior; 3us minutus, acuto-conicus. Antennæ mediocriter pectinatæ, apice serratæ, corporis triente vix breviores. Abdomen alas posticas triente superans. Pedes validi, breviusculi, late ciliati; tibiæ posticæ calcaribus quatuor longiusculis. Alæ sat latæ non longæ.

Male. Body long, stout. Eyes large. Proboscis full as long as the breadth of the head. Palpi obliquely ascending, rather short; second joint much longer than the first; third minute, acute-conical. Antennæ nearly one-third of the length of the body, moderately pectinated; the branches ceasing towards the tips, where the antennæ are serrated. Abdomen extending for rather more than one-third of its length beyond the hind wings. Legs stout, rather short, deeply ciliated; hind tibiæ with four rather long spurs. Wings rather broad, not long. Fore wings straight along the costa; three inferior veins; first and second near together at the base; third remote.

This genus seems to connect the *Arctiidæ* with the *Noctuities*.

1. ANTHEUA SIMPLEX.

Pallide testacea; caput et thorax luteo fasciata; abdomen supra nigricans, basi et apice testaceum, maculis lateralibus ochraceis; alæ albidæ, anticæ nitentes sericeæ strigis pallidissime fuscis.

Male. Pale testaceous. Head and thorax with slight pale luteous bands. Abdomen blackish above, except at the base and at the tip, with a row of orange spots along each side. Wings whitish.

Fore wings shining, silky, with very pale brown streaks between the veins. Length of the body 12 lines; of the wings 22 lines.

a. Port Natal. From M. Gueinzus' collection.

b. Cape. From M. Becker's collection.

2. ANTHEUA TRICOLOR.

Mas. *Flava; abdomen luteum, maculis lateralibus nigris; alæ anticæ macula discali atomaria fusca, subtus posticæque cinereæ.*

Male. Yellow. Head in front and about the base of the antennæ luteous. Palpi, pectus and legs brown. Antennæ tawny. Abdomen luteous, with a stripe of black spots along each side; under side cinereous. Fore wings with a discal spot composed of brown flecks; under side cinereous. Hind wings dark cinereous, rather paler beneath. Length of the body 9 lines; of the wings 20 lines.

a. Port Natal. From M. Gueinzus' collection.

Genus 36. ECPANTHERIA.

Corpus robustum. Proboscis mediocriter longa. Palpi brevissimi; articulus 3us acuminatus, minimus. Abdomen alas superans. Pedes validi; tibiæ posticæ calcaribus minutis apicalibus. Alæ mediocriter latæ; anticæ posticas longe superantes.

Mas. Antennæ serratæ. Alæ posticæ sæpissime breves nonnunquam subcaudatæ. *Fæm.*—Antennæ simplicis, non serratæ.

Ecpantheria, Hübn. Verz. Schmett. 183.

Phalæna Bombyx, p., Cram.; Stoll.

Bombyx, p., Fabr.

Body stout. Proboscis moderately long. Palpi very short; third joint acuminated, very small. Abdomen extending more or less beyond the hind wings. Legs stout; hind tibiæ with minute apical spurs. Wings moderately broad. Fore wings very much longer than the hind wings; second inferior vein about twice further from the third than from the first; fourth more than four times further from the third than the third is from the second.

Male. Antennæ serrated. Hind wings generally short; the interior angle dilated in some species, and forming a short tail. *Fem.*—Antennæ simple, not serrated.

North America.

1. ECPANTHERIA SCRIBONIA.

Alba, thorax et alæ anticæ ocellis plurimis nigris; abdomen cyaneum, vittis tribus macularibus luteis; alæ posticæ maculis nonnunquam marginalibus nigris.

Phalæna Scribonia, Stoll. Suppl. Cram. Pap. Exot. v. 177, pl. 41, f. 3.

Bombyx ocularia, Fabr. Ent. Syst. iii. 1, 425, 59.

Ecpanttheria Scribonia, Hübn. Samml. Exot. Schmett. ii. Lep. iii. Phal. ii. Veræ, ix. Hypercompæ, B. Pallidæ, i. f. 1—4. Verz. Schmett. (Phalænæ Veræ Hypercompæ Pallidæ), 183, 1835.

Phalæna oculatissima, Abbot & Smith, Nat. Hist. Lep. Ins. Georg. ii. 137, 69.

Hind wings of the male slightly caudate.

New York. Cayenne. Surinam.

The ringlets on the thorax and on the fore wings vary in size, number and shape; their borders are in some specimens thickened, and in others occupy the whole surface and convert the ringlets to spots. The spots of the hind wings also vary in size and number, and are fewer in the male than in the female. In the former sex the inner angle forms a short tail, in the latter it is hardly dilated.

a. North America. Presented by Major-Gen. Hardwicke.

b, c. Georgia. From Mr. Milne's collection.

d. ———?

Mexico.

A. Thorax albus.

A. Thorax ocellis plurimis fuscis. - - - caudata, Walk.

B. Thorax nigro-cyaneo decem maculatus. - - - extrema, Walk.

B. Thorax cinereus. - - - - - incarnata, Walk.

2. ECPANTHERIA CAUDATA.

Mas. Alba; caput antice cyaneum, macula alba; antennæ obscure cyaneæ; thorax ocellis plurimis fuscis; abdomen rufum, segmentis dorsalibus cyaneo interrupte fasciatis; tarsi subtus cyanei; alæ anticæ fasciis quinque aut sex obliquis ocellaribus fuscis; posticæ subcaudatæ.

Male. White. Head dark blue in front, excepting a white spot on the face. Antennæ dark blue. Thorax with numerous

brown ringlets, some of which are tinged with pale metallic blue or green. Abdomen red, clothed with testaceous hairs at the base; dorsal segments with broad blue bands, which are partly interrupted in the middle, and wholly interrupted on each side. Knees and tarsi beneath metallic blue. Fore wings with five or six oblique bands of small separate brown ringlets; those along the costa are larger and with broader borders, and nearly subquadrate. Hind wings with the inner angle prolonged into a short tail. Length of the body 9 lines; of the wings 25 lines.

This species much resembles *E. cyaneipes*, but the spots on the thorax are very different, and the tails of the hind wings are longer and without black spots.

a. Mexico. Presented by E. Doubleday, Esq.

3. ECPANTHERIA INCARNATA.

Cinerea; caput fascia arcuata alba-nigro marginata, palpi rufi, subtus albi; antennæ nigræ; thorax vittis quinque nigris duabusque albis; pectus album; abdomen cyaneum, rufo bivittatum, subtus testaceum nigro vittatum; femora vittis rufis nigro marginatis; tibiæ albo vittatæ; tarsi rufo fasciati; alæ anticæ strigis variis irregularibus albis nigro marginatis; posticæ basi rufæ fasciisque duabus coccineis macularibus obliquis.

Gray. Head with a curved white black-bordered band in front of the antennæ, and with a black border on each side, behind, and towards the mouth. Proboscis pale testaceous. Palpi red, white beneath. Antennæ black, white at the base. Thorax with five slender black stripes, the middle one and the inner pair abbreviated in front, accompanied with some white and red hairs behind; a white stripe on each side widening from the head to the fore wings. Pectus mostly white. Abdomen dark blue, with a red stripe on each side; under side testaceous, with a black stripe. Femora with red black-bordered stripes; tibiæ with white stripes; tarsi with red bands. Fore wings with various irregular white black-bordered streaks, which are broadest and most oblique along the costa, where the black hind border of them is dilated, and forms a discal mark; these streaks are mostly red on the under side. Hind wings red at the base and with two crimson macular oblique bands, which on the under side towards the costa are white with black borders. Length of the body $7\frac{1}{2}$ lines; of the wings 20 lines.

a. Mexico. Presented by E. Doubleday, Esq.

4. ECPANTHERIA EXTREMA.

Alba; caput antice nigro-cyaneum; antennæ nigræ; thorax nigro-cyaneo decem maculatus; pectus nigro-fuscum; abdomen nigro-cyaneum, testaceo bivittatum, subtus album, maculis nigris trivittatum; pedes nigro-cyanei, strigis maculisque albis; alæ anticæ fasciis duabus obliquis interruptis guttisque strigisque obscure fuscis. Mas.—Alæ posticæ cinereo-fuscæ. Fœm.—Alæ posticæ albæ.

White. Head bluish black in front. Antennæ black, tinged with blue at the base. Thorax with ten bluish black spots, two in front, two behind, and each three of the other six forming two intermediate bands. Pectus blackish brown. Abdomen bluish black, with a testaceous stripe on each side; under side white, with three rows of black spots. Legs bluish black, with white streaks and spots. Fore wings with two oblique more or less interrupted dark brown bands; the intermediate spaces with various dark brown spots, dots and streaks. *Male*.—Hind wings grayish brown, with two white spots, one costal, the other discal; cilia partly white. *Female*.—Hind wings white, with a few grayish brown submarginal spots and marginal dots.

Var. β. Male. Hind wings white; disk grayish brown towards the base; submarginal band and marginal dots grayish brown. Length of the body 6—8 lines; of the wings 14—24 lines.

a, b. Mexico. Presented by E. Doubleday, Esq.

c, d. Mexico. From M. Becker's collection.

West Indies.

A. Thorax totus albus. - - - - - oblitterata, *Walk.*

B. Thorax maculis ocellaribus.

A. Abdomen cyaneum, coccineo fasciatum. - nigriplaga, *Walk.*

B. Abdomen ochraceum, maculis lateralibus cyaneis.

A. Alæ posticæ maris vix caudata. - - - simplex, *Walk.*

B. Alæ posticæ maris caudis longiusculis. - decora, *Walk.*

5. ECPANTHERIA OBLITTERATA.

Alba, valida; antennæ subtus nigræ; abdomen supra luteum, basi, apice vittisque duabus macularibus albis; femora et tibiæ luteo vittata; alæ anticæ fasciis ocellaribus quatuor obliquis testaceis; posticæ bifasciatæ.

White, stout. Proboscis testaceous. Antennæ black beneath. Abdomen above luteous, with two rows of white spots; base and tip white. Femora and tibiæ with luteous stripes; ungues black. Fore wings with four oblique bands of connected testaceous ringlets. Hind wings with three more indistinct bands of the same; their hind borders slightly emarginate and undulating, with the inner angle somewhat dilated. Length of the body 9—10 lines; of the wings 30—32 lines.

a. Nevis. West Indies. Presented by the Entomological Club.

b, c. West Indies? Presented by E. Doubleday, Esq.

6. ECPANTHERIA NIGRIPLAGA.

Alba; antennæ nigræ; thorax ocellis viridi aut cyaneo-nigris; abdomen cyaneum, coccineo fasciatum; tibiæ nigro fasciatæ; tarsi nigri; alæ anticæ maculis albidis viridi-nigro marginatis; posticæ maculis duabus nigris costalibus, postice caudatis nigroque unimaculatis.

White. Proboscis testaceous. Antennæ black. Thorax with greenish or bluish black ringlets. Abdomen dark metallic blue, with crimson bands, clothed with blackish brown hairs at the base; tip with white hairs on each side; under side with tawny hairs at the tip. Tibiæ with black bands; tarsi black, partly white at the base. Fore wings with greenish or bluish black ringlets, whose disks are grayish or dingy white; these are largest on the borders, very small on the disk or towards the tips of the wings. Hind wings with two large black spots on the fore border, hairy, vaulted cylindrically, and each including a tuft along the abdomen, their tails reaching to the tip of the abdomen, and each with a large black elliptical spot. Length of the body 8 lines; of the wings 24 lines.

a. Jamaica. From Mr. Gosse's collection.

7. ECPANTHERIA SIMPLEX.

Mas. Alba; caput antice et subtus palpique nigro-fusca; antennæ nigro-fuscae, subpectinatae; thoracis discus ocellis nigro-fuscis; abdomen supra ochraceum, fasciis basalibus fuscis albisque, lateribus cyaneo maculatis, apice albo; pedes fusci, albo vittati, tarsi fasciis albis; alæ anticæ fasciis sex ocellaribus fuscis.

Male. White. Head in front and beneath and palpi blackish brown. Proboscis testaceous. Antennæ blackish brown, minutely pectinated, white above. Disk of the thorax with blackish brown ringlets, which vary in size and number. Abdomen orange above,

white at the tip, with brown and white bands at the base, and with a row of blue spots along each side. Legs brown, with white stripes; tarsi with white bands. Fore wings with six oblique bands of pale brown ringlets. Length of the body 7—8 lines; of the wings 20—22 lines.

a, b. Nevis. Presented by the Entomological Club.

c, d. West Indies? Presented by E. Doubleday, Esq.

Var. β . *Alæ posticæ vitta apud marginem interiorem interrupta nigra.*

Hind wings with a black interrupted stripe near the inner border.

a. Porto Rico. From Mr. Cuming's collection.

8. ECPANTHERIA DECORA.

Mas. *Alba; thorax ocellis novem cyaneis; abdomen luteum, e maculis cyaneis bivittatum; apice album; alæ anticæ ocellis plurimis angulisque costalibus nigris, litura discali cyanea; postice caudis sat longis, vitta apud marginem interiorem interrupta nigra.*

Male. White. Head blue about the eyes; vertex with a black band, which encloses a whitish spot. Palpi and antennæ black. Thorax with nine blue ocelli; two in front, then four in a curved band, and behind them three which form a triangle. Abdomen luteous, blue at the base, and with two rows of transverse blue spots; tip white, with four streaks; the outer pair black; the inner pair blue, united hindward. Legs with black stripes and bands; tarsi blue. Fore wings with numerous black ocelli, which are disposed in six oblique irregular bands; some angular and incomplete ocelli along the costa, and a blue mark on the discal areolet. Hind wings with a black interrupted stripe along the interior border, which terminates in a rather long tail. Length of the body 7 lines; of the wings 20 lines.

a. St. Domingo. From Mr. Tweedie's collection.

South America.

A. Abdomen luteo varium.

A. Thorax albus.

- A. Thorax innotatus. - - - - - Icasia, *Cram.*
 B. Thorax fasciis angulosis fuscis. - - - - - Orsa, *Cram.*
 C. Thorax maculis fuscis. - - - - - læta, *Walk.*
 D. Thorax ocellis testaceis aut fuscis. - - - - - Cunigunda, *Cram.*
 B. Thorax cervinus aut fuscus. - - - - - indecisa, *Walk.*
 B. Abdomen rufo varium. - - - - - obesa, *Walk.*

9. ECPANTHERIA CUNIGUNDA.

Mas. *Alba*; caput supra cyaneum; thorax ocellis fuscis; scutellum cyaneo bimaculatum; abdomen cyaneum, maculis lateralibus luteis, subtus testaceum, e maculis cyaneis trivittatum; pedes cyaneo varii; alæ anticæ maculis subquadratis costalibus testaceis nigro marginatis; posticæ cauda brevi nigro maculata. *Fœm.*—*Alba*; palpi ex parte fusci; antennæ nigrae; thorax ocellis quatuor testaceis; abdomen supra luteum fuscis tribus versicoloribus; tibiæ ocellis fuscis; tarsi nigricantes; alæ anticæ fasciis sex obliquis ocellaribus testaceis.

Phalæna Bombyx Cunigunda, *Cram. Pap. Exot.* iv. 104, pl. 344, f. D. E.

Ecpantheria Cunigunda, *Hübner. Verz. Schmett.* 183, 1886.

Surinam.

Male. White. Head metallic-blue in front and about the eyes. Thorax and fore wings with dark brown ringlets, which on the latter form six oblique bands. Scutellum with two blue spots. Abdomen above dark blue, clothed with brown hairs at the base, whitish at the tip, with a row of luteous triangular spots along each side; hind borders of some of the segments partly luteous; under side slightly testaceous, with three rows of blue spots. Femora with a blue spot on each tip; fore femora and fore tibiæ partly blue; tarsi blue. Fore wings with subquadrate slightly testaceous black-bordered costal spots. Hind wings with the inner angle prolonged into a short tail, and having a black spot.

a. Santa Féde. Bogotá. From Mr. Isaacson's collection.

Fem. White. Proboscis testaceous. Palpi partly brown. Antennæ black, white at the base. Thorax with four pairs of testaceous ringlets of different sizes and shapes. Abdomen above luteous, with three blue, purple, green or gray bands; these are more or less dilated and connected on each side, and excavated in the middle, and in one specimen the abdomen is gray above, with three luteous black-bordered stripes. Tibiæ with brown ringlets; tarsi blackish. Fore wings with six oblique bands of connected testaceous brown

ringlets, which are very variable in size and shape, and are in some cases partly confluent, and in one variety those in the fifth are partly shaded with brown; the borders of the costal ringlets, and of a reniform discal ringlet, are darker than the others in the wing. The ringlets are still more variable and irregular in the hind wings, which are occasionally nearly wholly pale brown.

a. Honduras. From Mr. Miller's collection.

b, c. Brazil. From M. Becker's collection.

d. Rio Janeiro. From Mr. Stevens' collection.

e. ——— ?

10. ECPANTHERIA ICASIA.

Mas. *Alba; abdomen hirtum e maculis cyaneis bivittatum; alæ anticæ ocellis costalibus et posticis fasciaque ocellari basim versus fuscis; posticæ apud marginem interiorem fusco bima-
culatæ.*

Phalæna Icasia, *Cram. Pap. Exot.* ii. 130, pl. 181, f. E.

Bombyx Lantanæ, *Fabr. Ent. Syst.* iii. 1, 437, 95.

Ecpantheria Lantanæ, *Hübner. Verz. Schmett.* 183.

Surinam.

11. ECPANTHERIA ORSA.

Mas. *Alba; thorax antice luteo bima-
culatus, fasciis duabus angulosis fuscis; abdomen luteum, fasciis cyaneis; alæ anticæ ocellis nigris, vix fasciatæ; posticæ margine interiore nigro.*

Phalæna Orsa, *Cram. Pap. Exot.* ii. 75, pl. 143, f. F.

Ecpantheria Orsa, *Hübner. Verz. Schmett.* 183, 1889.

Surinam.

12. ECPANTHERIA OBESA.

Fœm. *Alba, crassa; caput supra cyaneum; palpi supra nigri; antennæ nigrae; thorax ocellis fuscis, cyaneo bivittatus; abdomen supra rufum, fasciis cyaneis, subtus e maculis nigris trivittatum; pedes nigro vittati; alæ cæruleo albæ; anticæ e ocellis fuscis fasciatæ; posticæ maculis ocellisque nigricantibus.*

Fem. White, very stout. Head deep blue in front, except towards the mouth. Palpi black above, and at the tips. Antennæ black, metallic-blue towards the base. Thorax with pale brown ringlets, and with an apical tuft of deep blue hairs; disk slightly tinged with sky-blue; a deep blue stripe along each side. Abdomen

above bright red; each segment with a deep blue band, which appears deep black in some aspects; under side with a middle row of transverse black spots, and two lateral rows of black dots. Femora and tibiæ with black stripes; tarsi black, with white bands towards the base. Wings slightly tinged with sky-blue. Fore wings with six oblique bands of pale brown ringlets; the three outer bands much more regular and complete than the three inner bands; a cruciform mark in the third band composed of four ringlets. Hind wings with some blackish spots along the fore border, and with two or three blackish ringlets on the hind border. Length of the body 10 lines; of the wings 18 lines.

a. ——— ?

13. ECPANTHERIA LÆTA.

Alba; caput supra fuscum; palpi et antennæ nigra; thorax maculis octo cyaneo-fuscis; pectus cyaneo-nigrum, disco albo; abdomen cyaneo-nigrum, vittis lateralibus et segmentorum suturis luteis; pedes cyanei, femoribus subtus albis, tibiis luteo strigatis; alæ anticæ fasciis sex fuscis, tribus interruptis, subtus luteæ. Mas.—Alæ posticæ caudatæ, testaceo limpidæ, maculis marginalibus fuscis. Fœm.—Alæ posticæ cyaneo-nigræ, antice luteo fasciatæ, intus vitta lutea, postice luteæ maculis nigris.

Head and thorax white. Head in front brown, and tinged with blue. Proboscis pale testaceous. Palpi black. Antennæ black, tinged with blue towards the base. Thorax with eight blue-brown spots, two in front, four elongated lengthwise, and forming a band on the disk, and two behind. Pectus bluish black, with a white disk. Abdomen bluish black; sutures of the segments and a stripe on each side luteous. Legs dark blue; femora white beneath, and with a white streak near the tips above; tibiæ with luteous streaks. Fore wings white, with three oblique bands, which are interrupted by the white or luteous veins, and are accompanied by three slender irregular and more interrupted bands; under side mostly luteous. *Male*.—Spots on the thorax much darker than those of the female. Bands and stripes of the abdomen broader. Bands of the fore wings blackish brown, tinged with blue. Hind wings mostly bare and limpid, testaceous, with brown spots along the fore border, thickly clothed with testaceous and brown hairs along the inner border, where they are half folded and prolonged into a short tail. *Female*.—Bands of the fore wings olive-brown. Hind wings black, tinged with blue, with short luteous bands along

the fore border; hind border luteous, with black spots; inner border with a luteous stripe. Length of the body 9—10 lines; of the wings 22—28 lines.

a—d. Venezuela. From Mr. Dyson's collection.

14. ECPANTHERIA INDECISA.

Cervina (mas.) *aut fusca* (fœm.); *antennæ nigræ*; *thorax nigro vittatus*; *abdomen supra cyaneo-fuscum, vittis tribus luteis nigro marginatis*; *alæ anticæ fasciis sex obliquis ocellaribus nigris*. Mas.—*Pectus et abdomen subtus testacea*; *alæ posticæ pallide testaceæ, maculis marginalibus fuscis*. Fœm.—*Pectus cinereo-album*; *abdomen subtus album, fasciis apicalibus fuscis nigro marginatis*; *alæ posticæ fuscae fasciis anticis abbreviatis albis nigro marginatis*.

Head brown in front. Antennæ black. Thorax with slender black stripes, some of which are united in front and behind. Abdomen brown above, with a blue tinge, and with three entire or interrupted luteous black-bordered stripes, the middle one more or less abbreviated. Fore wings with six oblique bands of black ringlets. *Male*.—Thorax and fore wings fawn-colour; their stripes and spots with testaceous borders. Pectus and under side of the abdomen testaceous. Hind wings pale testaceous, bordered with a few brown spots, which vary in size and number. Legs testaceous, with black bands. *Female*.—Thorax and fore wings pale brown; their stripes and spots with whitish borders. Pectus grayish white. Abdomen beneath white, with short brown black-bordered bands at the tips. Legs grayish white, with brown black-bordered bands. Hind wings dark brown, with short white black-bordered bands along the fore border; tips and hind borders white, with a few brown black-bordered spots. Length of the body 6—8 lines; of the wings 16—22 lines.

a—d. South America. Presented by C. Darwin, Esq.

e. ———? From Mr. Milne's collection.

Africa.

The following species has some resemblance to *E. indecisa*, but hardly belongs to this genus.

15. ECPANTHERIA INDETERMINATA.

Testaceo-albida; *palpi nigri, subtus albi*; *antennæ nigræ*; *abdomen testaceum, subtus albidum*; *pedes nigricantes, subtus*

albido, tarsi nigro fasciatis. Mas.—Thorax nigro quadriguttatus. Abdomen e maculis fuscis trivittatum; alæ anticæ maculis et ocellis plurimis nigricantibus, posticæ maculis perpaucis marginalibus nigricantibus. Fœm.—Thorax ocellis duabus nigricantibus; abdomen fusco fasciatum; alæ anticæ ocellis plurimis fuscis, posticæ maculis paucis fuscis.

Male and fem. Whitish, with a slight testaceous tinge. Palpi black, white beneath. Antennæ black, white at the base. Abdomen testaceous; under side whitish. Legs blackish, mostly white beneath; tarsi with white bands. *Male.*—Head with a blackish dot behind. Antennæ minutely pectinated. Thorax with four small black spots. Abdomen with three rows of brown spots. Fore wings with numerous blackish spots or ringlets. Hind wings with very few submarginal or marginal blackish spots or dots. *Female.*—Head behind with a blackish ringlet. Thorax with two blackish ringlets. Abdomen with brown bands. Fore wings with numerous brown ringlets. Hind wings with a few brown spots. Length of the body 6—6½ lines; of the wings 18—20 lines.

a. Ashanti. From the Wesleyan Missionary Society's collection.

b. ———?

Country unknown.

The next species is nearly allied to *E. indecisa*, and is probably a native of South America.

16. ECPANTHERIA DEGENERA.

Fusca. Pallide fusca; palpi nigri, subtus albi; antennæ nigrae; thorax vittis quatuor nigris albido marginatis; abdomen nigro fasciatum, vitta media albida duabusque aurantiacis, subtus album fascia apicali nigra; pedes albi fasciis fuscis nigro marginatis; alæ anticæ fasciis sex obliquis fuscis nigro albidoque marginatis; posticæ albæ.

Pale brown. Head in front blackish brown, with a paler disk. Palpi black, white beneath. Antennæ black, whitish above, white at the base. Thorax on each side with two black whitish-bordered stripes, which are united in front and behind. Pectus mostly white. Abdomen dark brown, with black bands, and with three black-bordered stripes, the middle one whitish, the other two orange; under side white, with a short black band at the tips. Legs white, with brown black-bordered bands. Fore wings with six oblique bands of brown black-bordered spots, whose black borders are

encircled with whitish borders. Hind wings white. Length of the body 6 lines; of the wings 18 lines.

a. ———? From Mr. Milne's collection.

b. ———?

Genus 37. ALOA.

Mas et fœm. Corpus sat validum. Proboscis mediocriter longa. Palpi breves, validi, porrecti; articulus 2us 1o valde longior; 3us conicus, minimus. Antennæ breves, simplices, subsetosæ. Thorax pilis adpressis. Abdomen alas posticas paullo superans. Pedes mediocriter longi et validi; tibiæ posticæ calcaribus duobus minutis apicalibus. Alæ longiusculæ, non latæ.

Body rather stout. Proboscis moderately long. Palpi short, stout, porrect; second joint very much longer than the first; third conical, very minute. Antennæ simple in both sexes, minutely setose beneath, not more than one-fourth of the length of the body. Thorax smooth, with flat-lying hairs. Abdomen extending a little beyond the hind wings. Legs moderately long and stout; hind tibiæ with two minute apical spurs. Wings rather long, not broad. Fore wings with the first and inferior veins almost contiguous at the base; third about eight times further from the fourth than from the second.

Africa.

- A. Alæ anticæ albæ, fusco venosæ. - - - simplex, *Walk.*
- B. Alæ anticæ testaceæ maculis fasciaque fuscis, guttisque marginalibus nigris. - - - bifurca, *Walk.*
- C. Alæ anticæ roseo-albæ, nigro strigatæ et unifasciatæ. - - - delineata, *Walk.*
- D. Alæ anticæ fusæ, albo variæ. - - - marginalis, *Walk.*

1. ALOA SIMPLEX.

Alba; caput flavo-fasciatum; palpi lutei, apice nigri; antennæ nigre; abdomen supra luteum, e maculis nigris trivittatum; femora supra lutea; tibiæ supra tarsique nigra; alæ anticæ fusco venosæ.

White. Head with a yellow band behind. Proboscis tawny. Palpi luteous, black above and at the tips. Antennæ black. Abdomen luteous above, with three rows of black spots. Legs white; femora luteous above; knees and tibiæ above, and tarsi black.

Wings white. Fore wings with brown veins. Length of the body 6—7 lines; of the wings 17—18 lines.

a. Caffraria. From M. Becker's collection.

b—d. Port Natal. From M. Gueinzus' collection.

2. ALOA BIFURCA.

Testacea; palpi supra nigri; antennæ nigræ; thorax nigro octomaculatus; abdomen e maculis nigris trivittatum; pedes nigro-fusci, femoribus subtus albis; alæ anticæ maculis nonnullis fasciaque obliqua furcata fuscis guttisque marginalibus nigris; posticæ guttis marginalibus unaque discali fuscis.

Testaceous. Palpi black above. Antennæ black, slightly pectinated. Thorax with two black spots in front, a black spot on each side of the middle, and two more at the base of each fore wing. Abdomen with three rows of black spots. Legs blackish brown; coxæ partly luteous; femora white beneath. Fore wings with a brown spot in front and another behind near the base; in the middle an oblique brown band, which is dilated and forked in front and behind, where it is accompanied by a brown dot; a brown spot on the fore border near the tip and some black marginal dots. Hind wings with a brown discal dot and a row of brown marginal dots. Length of the body 6 lines; of the wings 16 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

3. ALOA DELINEATA.

Alba; caput rufo fasciatum; palpi rufi, apice nigri; antennæ nigræ; thorax flavo bivittatus, nigro biguttatus; abdomen supra rufum, fasciis dorsalibus guttisque lateralibus nigris; pedes supra flavi, femoribus anticis supra rufis, tibiis et tarsorum articulis apice nigris; alæ anticæ sæpissime roseo-albæ, nigro strigatæ et unifasciatæ; posticæ flavæ, maculis posticis unaque discali nigris.

White. Head with a very slight red band along the hind border; under side mostly red. Proboscis red. Palpi white beneath near their tips, which are black. Antennæ black. Thorax with two pale yellow dorsal stripes, and with a black dot on each side. Abdomen above red, with a dorsal row of short black bands, and with a row of black dots along each side. Legs yellow above; fore femora red above; tips of the tibiæ and of the joints of the tarsi black. Fore wings above with a slight yellow tinge, their disks with a slight rosy tinge, adorned with some black streaks, which

occupy more than half the length from the base, and are succeeded by an undulating slender black band; under side bright red along most of the length of the costa, and especially so towards the base, with a black spot near the fore border at much beyond half the length. Hind wings yellow, with a black discal spot, and with several black spots of various size near the hind border. Length of the body 9—12 lines; of the wings 24—32 lines.

Var. β. Fore wings without a black band near the hind border. Hind wings with only two black spots.

Var. γ like *var. β*. Fore wings without a rosy tinge. Hind wings with no black spots near the hind border.

Var. δ. Fore wings wholly white, with the exception of a few black dots towards the base. Abdomen wholly red above, with the exception of one or two black dots.

a. Cape. From M. Dregé's collection.

b—e. South Africa. Presented by Dr. A. Smith.

f. South Africa. From Mr. Argent's collection.

g. Port Natal. From M. Gueinzus' collection.

h. ——— ?

4. ALOA MARGINALIS.

Albus; palpi et antennæ nigra; thorax fascia lutea guttisque sex nigris; abdomen supra luteum, e guttis nigris trivittatum; pedes nigri, luteo-alboque fasciati; alæ anticæ maculis marginalibus albis; posticæ maculis submarginalibus fuscis.

White. Proboscis testaceous. Palpi and antennæ black. Thorax with a slender luteous band a little in front of the fore wings, and in front of it a brown mark, with a black dot on each side; two larger black dots near the base of each fore wing. Abdomen above luteous, with three rows of black dots; under side with two rows of black dots. Legs black; coxæ luteous, with a brown spot; femora with a luteous band; hind femora, tibiæ and tarsi with white bands. Fore wings brown, with large marginal white spots, which are smallest at the base and at the tips, and are accompanied by a few submarginal spots. Hind wings with a few large submarginal brown spots. Length of the body 6 lines; of the wings 18 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

Asia.

A. Alæ anticæ albæ.

A. Alæ anticæ ad costam rufæ.

Var. α. Thorax with a white dot on each side. Fore wings with a black dot near the costa, a little beyond the middle.

Var. β like *var. α*. Hind wings with a black spot near the middle of the fore border, and a black dot near the hind border towards the tip of the wing.

Var. γ like *var. β*. Hind wings with three black spots along the hind border.

Var. δ like *var. β*. Hind wings with four black spots along the hind border.

Var. ε like *var. δ*. Hind wings with two black spots near the fore border.

Var. ζ like *var. δ*. Fore wings with two black dots.

Var. η like *var. δ*. Fore wings with four black dots, three in a line across the middle, and one near the base of the hind border.

Var. θ. Abdomen with a red spot above at the base.

Var. ι. Head crimson, white in front. Abdomen above crimson, with a dorsal row of short black bands and two lateral rows of black dots; under side with two rows of black dots. Femora crimson above, with black tips; tibiæ and tarsi black above. Fore wings crimson along the costa, with three minute black dots, one in the disk beyond the middle, the other two near the outer border. Hind wings with four black spots along the hind border, and with one black spot in the middle near the fore border, which is reddish.

Var. κ like *var. ι*. Head nearly wholly white above. Prothorax wholly white. Dots on the fore wings almost obsolete. Hind wings wholly white along the fore border, and with only two black dots on the hind border.

Var. λ. Abdomen crimson, with three rows of black spots. Hind wings with an interrupted marginal black band.

a. Australia. From the Voyage of H.M.S. Rattlesnake.

b, c. North India. From Mr. Stevens' collection.

d, e. East Indies. From Archdeacon Clerk's collection.

f. East Indies. From Mr. Milne's collection.

g. North Bengal. Presented by W. W. Saunders, Esq.

h, i. Java. From the East India Company's collection.

j, k. North India. From Mr. L. James' collection.

l. Nepaul. Presented by Major-Gen. Hardwicke.

m. Ceylon. Presented by R. Templeton, Esq.

n. Bengal.

o. North China. From Mr. Fortune's collection.

6. ALOA MARGINATA.

Mas et fœm. Alba, nitens; caput rufo fasciatum; palpi supra rufi, apice nigri; abdomen rufum, e maculis nigris trivittatum, basi apiceque album; alæ anticæ nigro bivittatæ, costa rufa; posticæ maculis marginalibus unaque discali nigris.

Phalæna marginata, Donovan. Epit. Ins. New Holl. pl.

Chelonia marginata, Boisd. Voy. de l'Astrolabe, Pt. 1. Lep. 215, 4.

East Indies?

Male and female. White, shining. Head with a red hind band. Palpi red, black towards the tips, whitish beneath. Antennæ black. Abdomen bright red, white at the base and at the tip, with a dorsal row of short black bands and with two lateral rows of black dots. Fore wings bright red along the costa, with two black stripes, the fore one forked in front; a few black streaks beyond these stripes. Hind wings with one black discal spot and four black marginal spots. Length of the body $6\frac{1}{2}$ —7 lines; of the wings 19—21 lines.

a. Van Dieman's Land. Presented by E. Doubleday, Esq.

b. ———? Presented by Major-Gen. Hardwicke.

7. ALOA CANDIDULA.

Candida aut testacea; abdomen guttis nigris vittatum; alæ anticæ nonnunquam guttis paucis nigris.

Var. α. Pure white. Palpi partly red above, with a black mark towards the tips. Antennæ black, with white tomentum, red at the base. Abdomen with two lateral stripes of black dots. Femora red above, with a blackish dot on each tip; fore coxæ red above. Fore wings with a black dot at the tip of the discal areolet between the second and third inferior veins; costa red beneath.

a. Nepaul. Presented by Major-Gen. Hardwicke.

Var. β. Head, thorax and fore wings with a very slight testaceous tinge. Fore wings tawny along the costa, with a brown streak behind the discal areolet, and with three blackish dots, one in the disk at one-fourth of the length, the other two near the interior border. Abdomen above with three rows of black dots.

b. Nepaul. Presented by Major-Gen. Hardwicke.

Var. γ like *var. β*. Fore wings pale reddish testaceous, bright red along the costa, without blackish dots. Hind wings with a brown dot at the tip of the discal areolet. Length of the body 4 lines; of the wings 11 lines.

a. Ceylon. From the Rev. J. Wenham's collection.

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8. ALOA DIMINUTA.

Alba ; caput fusco fasciatum ; palpi apice fusco ; antennæ fuscae ; abdomen supra rufum, e guttis nigris trivittatum ; coxæ et femora supra rufa ; tibiæ tarsique supra fusca ; alæ anticæ ad costam rufescentes, apud venas subtestaceæ, gutta discali fasciæque subapicali nigris ; posticæ gutta discali nigra.

White. Head slightly testaceous, with a brown band behind. Proboscis testaceous. Palpi brown above towards the tips. Antennæ brown, red at the base. Abdomen above red, with three rows of black dots. Coxæ and femora red above ; tibiæ and tarsi brown above. Fore wings slightly testaceous along the veins, slightly red along the costa, with a black dot in the disk beyond the middle and a short black subapical streak. Hind wings with a black discal dot. Length of the body 4 lines ; of the wings 11 lines.

a. North India. From Mr. Stevens' collection.

9. ALOA BIFRONS.

Fœm. Alba ; caput antice nigrum ; palpi supra rufi, apice nigri ; abdomen supra rufum, basi album, e guttis nigris trivittatum ; pedes rufo-nigroque varii ; alæ guttis paucis nigris, posticæ rufæ.

Female. White. Head black in front. Palpi bright red, with black tips, white beneath. Antennæ black. Abdomen bright red above, mostly white at the base, with three rows of black dots. Coxæ and femora bright red above, the latter with black tips ; anterior tibiæ and tarsi black above ; hind tarsi black above, with a white band near the base. Wings beneath and hind wings also above bright red. Fore wings with a black subcostal dot, and two or three black dots by the internal border. Hind wings with a black anterior discal dot. Length of the body 7 lines ; of the wings 16 lines.

a. North China. From Mr. Cuming's collection.

b. North China. From Mr. Fortune's collection.

10. ALOA ISABELLINA.

Alba ; palpi lutei, apice nigri ; antennæ nigræ ; thorax cervino-albus ; abdomen luteum e maculis nigris trivittatum ; pedes lutei, coxis tibiisque nigro vittatis, tarsis nigris ; alæ pallide cervinæ, anticæ guttis quatuor discalibus nigris. Mas.—Thorax cervino trivittatus ; alæ posticæ cinereo-cervinæ. Fœm.—Alæ anticæ gutta subapicali nigra ; posticæ maculis tribus nigris.

White. Proboscis testaceous. Palpi luteous, with black tips above. Antennæ black. Thorax with a slight tinge of fawn-colour. Abdomen luteous, with three rows of black spots above and below. Legs luteous; knees and tarsi black; coxæ and tibiæ with black stripes. Wings pale fawn-colour. Fore wings with four black dots arranged tetragonally in the disk of the wing. *Male*.—Thorax with three fawn-coloured stripes, the lateral pair abbreviated hindward. Fore wings darker than those of the female. Hind wings grayish fawn-colour, a little darker than the fore wings. *Fem.*—Fore wings with a subapical black dot in a line with the hind pair of the discal dots. Hind wings with three black spots along the hind border, two posterior, one subapical. Length of the body 6—7 lines; of the wings 18—20 lines.

a, b. East Indies. From Archdeacon Clerk's collection.

c, d. North India. From Mr. Stevens' collection.

e. Silhet. From the Rev. J. Stainforths' collection.

f. Silhet. From Mr. Sowerby's collection.

11. ALOA TRIPARTITA.

Obscure fusea; caput supra pallide flavum, gutta postica nigra; antennæ nigræ; thoracis latera pallide flava; abdomen pallide flavum, fasciis dorsalibus fuscis; alæ anticæ vitta discali maculisque tribus fasciæque obliqua maculari albis; posticæ flavæ, maculis quatuor marginalibus fuscis.

Dark brown. Proboscis testaceous. Head above pale yellow, with a black hind dot. Antennæ black. Thorax pale yellow along each side. Abdomen pale yellow, with a row of short brown dorsal bands, the hinder one subapical, extending across the whole breadth, and connected with a brown subquadrate apical spot. Fore wings with a white discal stripe, which extends from the base to nearly half the length, and is composed of two spots which are connected by a short petiole; the second spot is accompanied in front by a white dot. Beyond the middle of the wing there is an oblique macular white band, which does not extend to the hind border. Hind wings yellow, with four large brown marginal spots, one anterior, one apical, and two posterior; the first and the second connected. Length of the body 5—5½ lines; of the wings 14—16 lines.

Var. β. Dot of the fore wings wanting; third and fourth spots of the hind wings connected in front.

Var. γ. Hindmost band of the abdomen abbreviated like the rest. Fore wings with a white marginal spot beyond the band. Hind wings yellow, with four brown unconnected marginal dots.

Var. δ like *var. γ*. Dot of the fore wings enlarged into a spot; three marginal brown dots beyond the band. Hind wings yellow, with a brown dentate border in front, and with a brown dot behind; some of the veins slightly bordered with brown.

a—c. North India. From Mr. L. James' collection.

d. East Indies. From Archdeacon Clerk's collection.

12. ALOA BIGUTTATA.

Obscure fusca; vertex rufo-alba; antennæ nigræ; thorax albus, nigro biguttatus; abdomen supra rufum, e maculis nigris trivittatum; coxæ et femora rufo vittata; alæ anticæ vitta discali alba; posticæ rufæ, maculis quatuor marginalibus fuscis.

Dark brown. Vertex reddish white. Antennæ black, reddish white at the base. Thorax white, and with a black dot on each side. Abdomen bright red above, with three rows of black spots, the middle row forming short bands. Coxæ and femora with red stripes. Fore wings with a white discal stripe, which extends from the base, is slightly curved forward, and ends just in front of the tip. Hind wings red, with four brown marginal spots, one anterior, one apical, and two posterior, the first and the second connected. Length of the body $5\frac{1}{2}$ lines; of the wings 16 lines.

a. Canara, Malabar Coast. Presented by S. N. Ward, Esq.

13. ALOA INTEGRA.

Obscure fusca; vertex flavo-alba; antennæ nigræ; thorax albo bivittatus; abdomen supra flavum, fasciis dorsalibus guttisque lateralibus nigris; alæ anticæ vitta discali alba; posticæ albæ, fusco marginatæ et uniguttatæ.

Dark brown. Vertex yellowish white. Proboscis testaceous. Antennæ black. Thorax with a white stripe on each side. Abdomen above yellow, with a row of short black dorsal bands, and with a row of black dots on each side. Fore wings with a white discal stripe, which extends from the base, is slightly curved forward, and ends at the tip of the wing. Hind wings white, with a yellow tinge along the inner border, and with a brown fore border, which is accompanied by a brown dot at a little beyond half the length. Length of the body 5 lines; of the wings 14 lines.

a. Philippine Islands. Presented by J. C. Bowring, Esq.

Country unknown.

- A. Alæ anticæ albo vittatæ. - - - - - dentata, Walk.
 B. Alæ anticæ albo fasciatæ. - - - - - erosa, Walk.

14. ALOA DENTATA.

Fusca ; caput supra album ; antennæ basi rufæ ; thorax supra albus, vitta guttisque duabus fuscis ; abdomen supra rufum, e maculis nigris trivittatum ; alæ anticæ vitta discali maculisque duabus albis ; posticæ rufæ ; maculis quinque marginalibus fuscis.

Brown. Head white above, red along the hind border. Antennæ red at the base. Thorax above white, with a brown stripe, which widens hindward, and has a brown dot on each side. Abdomen above red, with three rows of black spots, the middle row forming short bands. Fore wings with a white discal stripe, which is dentate in front at one-third of the length, is curved forward beyond the middle, and joins the costa near the tip of the wing ; outer border with two white spots forming an interrupted band. Hind wings red, with five large brown marginal spots, two anterior, one apical, and two posterior ; the first, second and third connected. Length of the body 6 lines ; of the wings 19 lines.

a. ———? From Mr. Milne's collection.

15. ALOA EROSA.

Fusca ; caput supra album maculis duabus fuscis, subtus rufum ; palpi subtus rufi ; thorax albo marginatus, nigro quadriguttatus ; abdomen supra rufum, e maculis nigris trivittatum ; femora rufo vittata ; alæ anticæ vitta discali fasciæque obliqua connexis rufo-albis ; posticæ rufæ, fascia lata marginali rufo trimaculata maculaque discali fuscis.

Brown. Head red beneath and on each side, white above with a brown spot on the hind border. Palpi red beneath. Thorax white in front and on each side ; two black dots in front and one on each side. Abdomen above bright red, with three stripes of black spots. Femora with red stripes. Fore wings with a reddish white irregular discal stripe, which extends from the base to half the length, and is much indented on each side ; it includes near the body a brown dot, and terminates in an oblique band which extends to each border, but is interrupted in front ; on the under side it is red. Hind wings bright red, with a brown discal spot, and with a very broad marginal

brown band, which includes three red marginal spots. Length of the body 7 lines; of the wings 24 lines.

*a. ——— ?

Genus 38. ARDICES.

Corpus mediocriter robustum. Caput et thorax dense hirta. Proboscis capitis latitudine brevior. Palpi breves, validi, porrecti, pilosi; articulus 2us 10 multo longior; 3us conicus, minimus. Abdomen alas posticas non superans. Pedes mediocriter robusti; tibiæ posticæ calcaribus quatuor longiusculis. Alæ latiusculæ. *Mas.*—Antennæ mediocriter pectinatæ. *Fæm.*—Antennæ subpectinatæ.

* Genus . MALLOCEPHALA.

Corpus crassum. Caput parvum. Palpi recti, elongati, graciles, pilosi; articulus 3us arcuatus. Antennæ pectinatæ. Abdomen cylindricum, crassiusculum. Alæ oblongæ, integræ.

Mallocephala, *Blanch. Gay, Hist. Chil.*

1. MALLOCEPHALA RUBRIPES.

Fulvo lanosus; palpi femoraque rosea; abdomen supra roseum, linea media nigra; alæ totæ fuliginosæ; posticæ dilutiores.

Mallocephala rubripes, *Blanch. Gay, Hist. Chil. Atlas, Zool. Ent. Lep. pl. 4, f. 7.*

Coquimbo.

Genus . COMPSOPRIUM.

Corpus elongatum, cylindricum. Proboscis gracilis, elongata. Palpi elongati, graciles, parum squamosi; articulus 3us oblongus, acutus. Antennæ elongatæ. Pedes valde elongati. Alæ oblongæ, angustiusculæ.

Compsoprium, *Blanch. Gay, Hist. Chil.*

Ctenucha Group? *Cat. Lepid. Hetero. Pt. 2.*

1. COMPSOPRIUM VITTIGERUM.

Nigro-chalybæum; caput aurantiacum; antennæ nigræ; alæ anticæ nigræ, venulis albido vittatis; posticæ totæ nigro-chalybææ.

Compsoprium vittigerum, *Blanch. Gay, Hist. Chil.*

Chelonia vittigera, *Blanch. Gay, Hist. Chil. Atlas, Zool. Ent. Léop. pl. 4, f. 1.*

Coquimbo.

Body moderately stout. Head and thorax thickly clothed with hairs. Proboscis shorter than the breadth of the head. Palpi short, stout, porrect, hairy; second joint much longer than the first; third conical, very minute. Abdomen extending as far as the hind wings. Legs moderately stout; hind tibiæ with four rather long spurs. Wings rather broad. Fore wings with the first and second inferior veins contiguous at the base; third about eight times further from the fourth than from the second. *Male*.—Antennæ moderately pectinated. *Female*.—Antennæ very minutely pectinated.

Nearly allied to *Arctia* and to *Spilosoma*.

1. *ARDICES FULVOHIRTA*.

Alba; caput antice nigrum; palpi supra nigri; antennæ nigræ; thorax nigro trivittatus; abdomen e maculis nigris trivittatum, subtus nigro fasciatum; pedes nigri, subtus albi; alæ anticæ fasciis obliquis irregularibus fuscis, postice macula discali nonnullisque marginalibus fuscis. *Mas.*—Thorax luteo bimaculatus; abdomen luteum. *Fœm.*—Thorax rufo bimaculatus; abdomen rufum.

White. Head black in front. Proboscis testaceous. Palpi black above. Antennæ black, white at the base. Thorax very thickly clothed with tawny hairs, with three short black stripes, which vary much in breadth. Abdomen with three rows of black spots; under side with black bands. Legs black, white beneath. Fore wings with four or five irregular oblique brown bands, which vary in breadth and outline, and occupy most of the surface, and are partly confluent, though interrupted by the white veins. Hind wings with one discal and several marginal and submarginal brown spots. *Male*.—Palpi thickly clothed beneath with luteous hairs. Thorax with a luteous spot on each side in front. Femora and abdomen luteous above. *Female*.—Thorax with a red spot on each side in front. Femora and abdomen red above. Length of the body 7—8 lines; of the wings 20—23 lines.

a—c. Van Dieman's Land. Presented by Morton Allport, Esq.

d—f. Van Dieman's Land. From Mr. A. J. Smith's collection.

g—k. Van Dieman's Land. Presented by R. Butler, Esq.

l, m. Kangaroo Island. Presented by E. Doubleday, Esq.

n. New Holland. From Mr. Stevens' collection.

Genus 39. NERITOS.

Mas. Corpus gracile. Proboscis longiuscula. Palpi mediocriter longi, oblique adscendentes; articulus 2us 1o multo longior; 3us minimus. Antennæ subpectinatae, corporis vix breviores. Abdomen alas posticas triente superans. Pedes graciles; tibiæ posticæ calcaribus quatuor longis. Alæ angustæ, anticæ subtus basi fasciculatæ.

Male. Body slender. Proboscis rather long. Palpi moderately long, obliquely ascending; second joint much longer than the first; third very minute. Antennæ rather slightly pectinated, nearly as long as the body. Abdomen extending for one-third of its length beyond the hind wings. Legs slender; hind tibiæ with four long spurs. Wings narrow. Fore wings with a tuft beneath in the disk near the base, and with a corresponding convexity above; first and second inferior veins contiguous at the base; third near the second; fourth remote from the third.

1. NERITOS REPANDA.

Pallide fusca; caput testaceum, fusco fasciatum; palpi testacei, subtus albi; abdomen album, disco dorsali rufo; pedes albi; alæ anticæ fascia lata obliqua flavo-albida; posticæ flavo-albidæ.

Pale brown. Head testaceous, with a brown band in front. Palpi and proboscis testaceous, the former white beneath. Antennæ brown, white towards the tips. Abdomen white; disk above pale red. Legs white. Fore wings with a fusiform tubercle in the disk near the base, and with a broad oblique yellowish white band, which is dilated along the border at each end, and extends there to the tip. Hind wings yellowish white. Length of the body $4\frac{1}{2}$ lines; of the wings 12 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

Genus 40. AMELES.

Mas. Corpus lineare, sat robustum. Proboscis longa. Palpi graciles, porrecti, mediocriter longi; articulus 2us 1o multo longior; 3us lanceolatus, gracilis, 2o duplo brevior. Antennæ subpectinatae, corporis dimidio non longiores. Abdomen apice tumidum, alas posticas triente superans. Pedes robusti; tibiæ posticæ calcaribus quatuor mediocriter longis. Alæ angustæ, longiusculæ.

Allied to the *Noctuities*. *Male*.—Body linear, rather stout. Proboscis long. Palpi slender, porrect, moderately long; second joint much longer than the first; third lanceolate, slender, about half the length of the second. Antennæ very minutely pectinated, not more than half the length of the body. Abdomen tumid at the tip, extending for one-third of its length beyond the hind wings. Legs stout; hind tibiæ with four moderately long spurs. Wings narrow, rather long. Fore wings with the second inferior vein nearly as far from the first as from the third; third full twice further from the fourth than from the second.

AMELES RUBRIPLAGA.

Fœm. *Fusca; vertex et frons albæ; palpi subtus testacei; thoracis discus anticus albus, fusco varius; latera albo vittata; pectus luteum; abdomen supra rufum, disco fusco, triente apicali lutea, ventre testaceo; pedes testacei, tibiis anterioribus albido vittatis, tarsis anterioribus albido fasciatis, tibiis tarsisque posticis fulvis testaceo vittatis; alæ anticæ e maculis albis testaceo marginatis univittatæ; posticæ basi maculisque anticis rufis.*

Fœm. Brown. Vertex and front white. Proboscis ferruginous. Palpi testaceous beneath. Disk of the thorax in front white, intersected by a slender brown line, and in front with a brown dot on each side; a short white stripe along each side. Pectus luteous. Abdomen red above; disk mostly brown; apical third part luteous; under side testaceous. Legs testaceous; anterior tibiæ with whitish stripes; anterior tarsi with whitish bands; hind tibiæ and tarsi tawny, with testaceous stripes and bands. Fore wings with a curved stripe, extending from the base to beyond the middle of the fore border, composed of white testaceous-bordered confluent spots, and enclosing one white and one testaceous spot; a curved band of like colour occupies the tip of the wings, and includes a brown spot. Hind wings red at the base, and with red spots along the fore border. Length of the body 6 lines; of the wings 18 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 41. BARITIUS.

Mas. Corpus cylindricum, longiusculum. Proboscis corporis dimidio brevior. Palpi longiusculi, ascendentes; articulus 2us subarcuatus, 1o multo longior; 3us linearis, 2o multo gracilior

et ejus triente brevior. Antennæ subpectinatae, corporis dimidio non breviores. Abdomen alas posticas longe superans. Pedes sat graciles, longiusculi; tibiæ posticæ calcaribus quatuor longis. Alæ longæ, angustæ.

Male. Body cylindrical, rather long. Proboscis less than half the length of the body. Palpi rather long, ascending; second joint slightly curved, much longer than the first; third linear, much more slender than the second, and less than one-third of its length. Antennæ minutely pectinated, full half the length of the body. Abdomen extending far beyond the hind wings. Legs rather slender, somewhat long; hind tibiæ with four long spurs. Wings long and narrow. Fore wings straight in front; discal fold distinct; first inferior vein intersecting the discal areolet, further from the second than the second is from the third; third about six times further from the fourth than from the second.

1. BARITIUS DISCALIS.

Mas. *Pallide luteus, subtus pallide flavus; palpi fuscii, extus rufo vittati; antennæ fuscae; thorax macula antica discali flava-fusco marginata; abdomen supra rufum; tibiæ fusca unifasciatæ; tarsi fasciis fuscis; alæ anticæ fasciis obliquis sex e maculis luteo-flavis ex parte fusco marginatis, fusco trinotatæ; posticæ pallide rufæ, basi costa ciliisque flavis.*

Male. Luteous, pale yellow beneath. Head above pale yellow. Proboscis ferruginous. Palpi brown; each with a red stripe on the outer side. Antennæ brown, whitish testaceous above and at the base. Thorax with a large obconical pale yellow brown-bordered spot occupying the disk in front. Abdomen red above. Tibiæ with a brown band on each; tarsi with brown bands. Fore wings with six oblique bands of yellow luteous-disked partly brown-bordered spots; three brown marks, one at the tip of the discal areolet, one near the tip in front of the first inferior vein, the third large, on the interior angle; ciliæ alternately brown and luteous. Hind wings pale red, yellow in front and towards the base, and with yellow ciliæ. Length of the body $6\frac{1}{2}$ lines; of the wings 20 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

Genus 42. ELYSIUS.

Mas. Corpus longiusculum, cylindricum, sublineare. Proboscis corporis dimidio æqualis. Palpi erecti, longiusculi; articulus 2us pilosus, subarcuatus, 1o fere duplo longior; 3us conicus, mini-

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of three small spots. Hind wings whitish, semihyaline, with reddish borders. Length of the body 8 lines; of the wings 20 lines.

a. Parà. Presented by Gordon Graham, Esq.

2. ELYSIUS? CROCOS.

Fuscus; corpus subtus albidum; thoracis discus rufo-luteus; abdomen roseum; alæ anticæ margine exteriori fasciisque tribus abbreviatis luteis rufo conspersis, maculaque magna discali testacea rufo marginata; posticæ roseæ.

Phalæna Crocos, *Cram. Pap. Exot.* ii. 44, pl. 126, f. E.

Zatrephes Crocas, *Hübner. Verz. Schmett.* 171, 1766.

Surinam.

3. ELYSIUS HERMIA.

Mas. Luteus, rufo conspersus; abdomen rufescens; alæ anticæ olivaceæ, margine exteriori atomisque fuscis, basi fasciisque quatuor plerumque interruptis luteis rufo conspersis; posticæ testaceæ, fascia angusta submarginali rufa.

Phalæna Hermia, *Cram. Pap. Exot.* ii. 136, pl. 185, f. F.

Zatrephes Hermia, *Hübner. Verz. Schmett.* 171, 1767.

Surinam.

4. ELYSIUS? SANGUINOLENTUS.

Incarnatus; alæ anticæ subacuminatæ, macula discali limpida, macula magna postica basali dimidioque apicali subpallidioribus, atomis incarnatis.

Phalæna sanguinolenta, *Cram. Pap. Exot.* iii. 102, pl. 252, f. A.

Zatrephes sanguinolenta, *Hübner. Verz. Schmett.* 171, 1768.

Surinam.

5. ELYSIUS DOROTHEA.

Fulvus; alæ obscure fuscae, anticæ macula magna subquadrata postica basim versus fulva fasciis duabus obscurioribus, maculaque parva discali albida luteo marginata.

Phalæna Bombyx Dorothea, *Cram. Pap. Exot.* iv. 228, pl. 397, f. K.

Zatrephes Dorothea, *Hübner. Verz. Schmett.* 171, 1769.

Surinam.

6. ELYSIUS ILUS.

Rufo-cervinus ; alæ anticæ fuscae, lituris basalibus ut costalibus fasciæque furcata subapicali cervinis rufo punctatis, posticæ roseæ, apice pallide testaceæ.

Phalæna Ilus, *Cram. Pap. Exot.* i. 145, pl. 92, f. E.

Zatrephes Ilus, *Hübner. Verz. Schmett.* (*Phalæna Veræ Hipocritæ Sphingiformes*) 171, 1770.

Surinam.

Genus 43. MALABUS.

Mas. Corpus robustum, non longum. Proboscis longiuscula. Palpi validi, ascendentes, mediocriter longi; articulus 2us 1o valde longior; 3us conicus, minimus. Antennæ distincte serratæ, aut subpectinatæ. Abdomen alas posticas paullo superans. Pedes graciles; tibiæ posticæ calcaribus nullis aut duobus apicalibus minimis. Alæ sat angustæ, non longæ.

Male. Body stout, not long. Proboscis rather long. Palpi stout, ascending, moderately long; second joint very much longer than the first; third conical, very minute. Antennæ strongly serrated or very minutely pectinated. Abdomen extending for one-fourth of its length beyond the hind wings. Legs slender; hind tibiæ with no spurs or with an extremely minute apical pair. Wings rather narrow, not long. Fore wings with the first and second inferior veins contiguous at the base; third about four times further from the fourth than from the second.

1. MALABUS INCERTUS.

Rufus ; palpi testacei ; antennæ fuscae ; abdomen subtus fuscum ; alæ anticæ cervinæ maculis duabus fuscis, subtus rufæ ; posticæ subtus fere albæ.

Pale red. Palpi and proboscis testaceous. Antennæ brown. Abdomen brown beneath. Legs white; fore coxæ red above. Fore wings fawn-colour, with two indistinct brown spots, one by the hind border before the middle, and one by the fore border beyond the middle; under side pale red, fawn-colour along the costa and at the tips. Hind wings nearly white beneath. Length of the body 5 lines; of the wings 12 lines.

a. Parà. Presented by Reginald Graham, Esq.

Genus 44. PARACLES.

Mas. Corpus robustum. Caput et thorax dense hirta. Proboscis brevis. Palpi valde hirti; articulus 3us minimus. Antennæ subpectinatæ, corporis dimidio longiores. Abdomen apice incrassatum, alas posticas non superans. Pedes validi, hirti; tibiæ posticæ calcaribus quatuor parvis. Alæ anticæ sat angustæ, subtrigonæ; posticæ anticis paullo latiores.

Male. Body stout. Head and thorax very thickly hairy. Proboscis short. Palpi very hairy; third joint very small. Antennæ minutely pectinated, more than half the length of the body. Abdomen rather less thickly clothed than the thorax, not extending beyond the hind wings, very thick about the anus. Fore wings rather narrow, nearly triangular, straight along the costa; outer border oblique and slightly convex; hind angle very obtuse; first, second and third inferior veins near together at the base; fourth about twice further from the third than the third is from the first. Hind wings rather broader than the fore wings and about two-thirds of their length. Legs stout, hairy; hind tibiæ with four small spurs.

1. PARACLES CONTRARIA.

Mas. *Obscure fusca; antennæ testaceæ; abdomen testaceo bivitatum; alæ anticæ basi costaque subtestaceis; posticæ albæ, cinereo marginatæ.*

Male. Dark brown. Antennæ testaceous. Abdomen with a testaceous stripe on each side; tip testaceous beneath. Fore wings slightly testaceous at the base and with a pale testaceous costa. Hind wings white, with grayish borders, which are broadest in front of the tips; costa pale testaceous beneath. Length of the body 5 lines; of the wings 14 lines.

a. Parà. Presented by Gordon Graham, Esq.

b. Parà. Presented by J. P. G. Smith, Esq.

Genus 45. BITURIX.

Group. 1.

Corpus sat gracile. Proboscis mediocriter longa. Palpi breves, graciles, porrecti; articulus 2us 1o multo longior; 3us parvus, conicus, acuminatus. Abdomen alas posticas dimidio superans.

Pedes longiusculi, sat graciles; tibiæ posticæ calcaribus quatuor minutis. Alæ longiusculæ, sat angustæ. *Mas.*—Antennæ subpectinatae. *Fæm.*—Antennæ simplices.

Body rather slender. Proboscis moderately long. Palpi short, slender, porrect; second joint much longer than the first; third small, conical, acuminate. Legs rather long and slender; hind tibiæ with four minute spurs. Wings rather long and narrow. Fore wings very much longer than the hind wings; second inferior vein hardly further from the third than from the first; fourth curved near the base, full four times further from the third than the third is from the second. Abdomen extending for half its length beyond the hind wings. *Male.*—Antennæ minutely pectinated. *Fem.*—Antennæ simple.

1. BITURIX DIVERSIPES.

Albus; palpi apice nigri; antennæ subtus nigrae; abdomen supra rufum, maculis albis trivittatum; pedes antici nigro vittati, coxis femoribusque rufo vittatis; alæ albo venosæ.

White. Palpi with black tips. Proboscis testaceous. Antennæ black beneath. Thorax with three slender black streaks. Abdomen bright red above, with three rows of black dots. Fore legs with black stripes; coxæ and femora with red stripes. Wings semihyaline, with white veins; costa of the fore wings grayish along the apical half. Length of the body $5\frac{1}{2}$ lines; of the wings 15 lines.

a, b. Venezuela. From Mr. Dyson's collection.

Group 2.

Fæmina. Corpus sat gracile. Proboscis mediocriter longa. Palpi breves, graciles, porrecti; articulus 2us 1o multo longior; 3us acuminatus, minimus. Antennæ subpectinatae. Abdomen alas posticas fere dimidio superans, apice dense fasciculatum. Pedes longiusculi, sat graciles; tibiæ posticæ calcaribus quatuor parvis. Alæ longiusculæ, sat angustæ; anticæ posticis valde longiores.

Fem. Body rather slender. Proboscis moderately long. Palpi short, slender, porrect; second joint much longer than the first; third acuminate, very minute. Antennæ very minutely pectinated. Abdomen extending for nearly half its length beyond the hind wings, thickly tufted at the tip. Legs rather long and slender; hind tibiæ with four minute spurs. Wings rather long and narrow. Fore wings very much longer than the hind wings; first and second inferior veins contiguous at the base; third about thrice further from the fourth than from the second.

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2. BITURIX INTACTUS.

Albus ; antennæ subtus nigræ ; palpi testacei apice nigri ; thorax antice testaceus ; abdomen supra testaceum, e guttis nigris trivittatum, apice albo lunuginosum ; coxæ anticæ testacæ ; alæ albo venosæ.

White. Palpi testaceous, with black tips. Proboscis testaceous. Antennæ black beneath. Thorax testaceous above in front. Abdomen testaceous above, with three rows of black dots, thickly covered with white wool at the tip. Fore coxæ testaceous. Wings with white veins. Length of the body $4\frac{1}{2}$ lines; of the wings 13 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 46. PURIUS.

Mas. Corpus breviusculum, sat validum. Proboscis corporis dimidio brevior. Palpi pilosi, sat longi, subascendentes ; articulus 2us 1o multo longior ; 3us acuminatus, minimus. Antennæ sat late pectinatæ. Abdomen alas posticas paullo superans. Pedes breviusculi ; tibiæ posticæ calcaribus quatuor parvis. Alæ sat angustæ.

Male. Body rather short and stout. Proboscis not half the length of the body. Palpi hairy, rather long, slightly ascending ; second joint much longer than the first ; third acuminated, very minute. Antennæ rather deeply pectinated. Abdomen extending rather beyond the hind wings. Legs rather short ; hind tibiæ with four small spurs. Wings rather narrow. Fore wings straight in front ; second inferior vein equally distant from the first and from the third ; third about six times further from the fourth than from the second. Hind wings slightly convex in front.

1. PURIUS SORDIDUS.

Mas. *Pallide fuscus, subtus canus ; abdomen supra rufum, fasciis nigris ; tarsi obscure fusci, fasciis pallidis ; coxæ anticæ lateribus rufis ; femora antica rufa, apice nigra ; alæ anticæ fusco conspersæ, costa venisque fusco guttatis ; posticæ albida.*

Male. Pale brown, hoary beneath. Proboscis tawny. Antennæ hoary above. Abdomen red above, with black bands. Tarsi dark brown, with pale bands ; fore coxæ red on each side ; fore

femora red, with black tips. Fore wings sprinkled with brown, and with brown dots along the costa and on the veins. Hind wings whitish. Length of the body 5 lines; of the wings 14 lines.

a. Parà. Presented by J. P. G. Smith, Esq.

b. Venezuela. From Mr. Dyson's collection.

Genus 47. APHYLE.

Corpus mediocriter robustum. Proboscis sat longa. Palpi validiusculi, subarcuati, oblique ascendentes; articulus 2us 1o valde longior; 3us conicus, 2i dimidio paullo brevior. Abdomen alas posticas paullo superans. Pedes mediocriter validi, longiusculi; tibiæ posticæ calcaribus quatuor sat parvis. Alæ longiusculæ, sat angustæ; anticæ posticis multo longiores.

Body moderately stout. Proboscis moderately long. Palpi rather stout, slightly curved, obliquely ascending; second joint very much longer than the first; third conical, rather less than half the length of the second. Abdomen extending for one-fourth of its length beyond the abdomen. Legs moderately stout, rather long; hind tibiæ with four rather small spurs. Wings rather long and narrow. Fore wings much longer than the hind wings; first, second and third inferior veins contiguous at the base; fourth moderately remote.

1. APHYLE MARGARITACEUS.

Albus; caput antice luteum; palpi supra nigri; pedes anteriores fusco fasciati; alæ margaritacæ, anticæ fasciis tribus interruptis fuscis. Mas.—Thorax nigro biguttatus; abdomen et alæ posticæ subcrocea.

Male. White. Head luteous in front of the antennæ, and with luteous hairs beneath. Palpi black, white beneath. Proboscis testaceous. Antennæ brown. Thorax with a black dot on each side. Abdomen saffron above. Fore and middle legs with brown bands. Wings with a pearly lustre. Fore wings luteous along the costa, and with three brown oblique bands, the first composed of three spots, the second of two streaks, the third entire, curved inward; a black streak on the costa beyond it. Hind wings pale saffron, white in front. *Female.*—White. Thorax without black dots. Abdomen very slightly testaceous in the disk above towards the tip. Wings less pearly than in the male. Fore wings indistinctly testaceous along the costa; middle spot of the first band wanting. Hind wings quite white. Length of the body 4—5½ lines; of the wings 12—14 lines.

a, b. Parà. From Mr. Bates' collection.

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Genus 48. AMAXIA.

Mas. Proboscis breviuscula, corporis dimidio brevior. Palpi ascendentes, mediocriter longi; articulus 3us conicus, minimus. Antennæ subpectinatæ, corporis dimidio longiores. Abdomen alas posticas sat longe superans. Sexualia parva, occulta. Pedes breviusculi; tibiæ posticæ calcaribus quatuor breviusculis. Alæ angustæ.

Male.—Proboscis rather stout, less than half the length of the body. Palpi ascending, moderately long; third joint conical, very minute. Antennæ minutely pectinated, three-fourths of the length of the body. Abdomen extending some distance beyond the hind wings; sexualia small, concealed. Legs rather stout; fore tibiæ with short apical spurs; hind tibiæ with four rather short spurs. Wings narrow. Fore wings with two superior veins; discal fold distinct; first inferior vein curved, near the second at its base; third a little nearer to the second than to the fourth. Hind wings convex along the fore border; costal vein springing from the subcostal opposite the middle of the areolet; three inferior veins; first and second united at the base, third at some little distance from them.

1. AMAXIA PARDALIS.

Læte flava, subtus alba; antennæ testaceæ; abdomen supra rufum; alæ anticæ ex parte rufo venosæ guttis plurimis variis fuscis, posticæ albæ.

Bright yellow. Body, palpi and legs white beneath. Palpi striped with brown. Proboscis and antennæ testaceous. Abdomen red above, yellow at the tip. Tibiæ with a few brown dots; fore tibiæ partly red. Fore wings with numerous brown dots and spots of various size, and irregularly disposed, partly bordered with red, some of them forming two incomplete bands, one near the base, the other near the tip. Hind wings white, slightly tinged with yellow and red, their fore border very convex. Length of the body 5 lines; of the wings 15 lines.

a. Ega, on the Amazon. From Mr. Bates' collection.

Genus 49. THEAGES.

Mas. Corpus gracile. Proboscis mediocriter longa. Palpi longiusculi, oblique ascendentes, fere nudi; articulus 2us 1o valde longior; 3us gracilis, lanceolatus, 2i triente æqualis. Antennæ longiusculæ, subpectinatæ. Abdomen alas posticas triente superans. Pedes longiusculi; tibiæ posticæ calcaribus quatuor longis. Alæ angustæ.

.5. A .5.

V .8. V .8. V
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Male. Body slender. Proboscis moderately long. Palpi rather long, obliquely ascending, nearly bare; second joint very much longer than the first; third slender, lanceolate, about one-third of the length of the second. Antennæ minutely pectinated, rather long. Abdomen extending for one-third of its length beyond the hind wings. Legs rather long; hind tibiæ with four long spurs. Wings narrow. Fore wings with the first and second inferior veins contiguous at the base; third very near the second; fourth remote from the third.

- A. Thorax vittis tribus interruptis fuscis. - leucophæa, *Walk.*
 B. Thorax e maculis nigris bifasciatus. - quadricolor, *Walk.*

1. THEAGES LEUCOPHÆA.

Albida; caput fusco varium; antennæ nigræ; thorax vittis tribus interruptis fuscis; abdomen cinereo-fuscum, apice luteum, subtus albo bivittatum; pedes cinereo-fusci, albo vittati; alæ anticæ basi maculisque anticis discalibusque fuscis; posticæ cinereo hyalinæ fusco marginatæ.

Whitish. Head brown in front and beneath, and with a large brown spot on the vertex. Proboscis tawny. Palpi white beneath towards the base. Antennæ black, white above towards the base. Thorax with three slight brown interrupted stripes. Abdomen grayish brown; tip luteous; under side with two broad white stripes. Legs grayish brown, with white stripes. Fore wings brown at the base, and with brown spots along the borders and on the end of the discal areolet; veins partly streaked with brown; under side more brown. Hind wings grayish hyaline, with brown borders. Length of the body 6 lines; of the wings 18 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

2. THEAGES QUADRICOLOR.

Mas. Alba; caput subtus nigrum; palpi nigri, apice albi; antennæ nigræ; thorax e maculis nigris bifasciatus; abdomen rufum maculis lateralibus apiceque nigris, subtus albidum; pedes nigro-fusci, albo fasciati; alæ anticæ nigro maculatæ, subtus posticæque cinereæ.

Male. White. Head black beneath. Proboscis tawny. Palpi black, with white tips. Antennæ black, white towards the base above. Thorax with two bands of black spots. Abdomen bright red, with a row of black spots along each side and with a black tip; under side whitish, with a slight red tinge. Legs blackish brown,

with white bands. Fore wings with numerous black spots; under side dark gray. Hind wings dark gray. Length of the body 4—5 lines; of the wings 12—14 lines.

a, b. Brazil. Presented by H. Low, jun., Esq.

c. Rio Janeiro. From Mr. Stevens' collection.

Genus 50. AGRISIUS.

Corpus sat gracile. Oculi magni, extantes. Proboscis corporis dimidio vix brevior. Palpi longiusculi, subascendentes; articulus 2us 1i longitudine; 3us linearis, 2o paullo longior. Abdomen alas posticas non superans. Pedes mediocriter longi et validi; tibiæ posticæ calcaribus quatuor longis. Alæ sat angustæ.

Body rather slender. Eyes large, prominent. Proboscis nearly half the length of the body. Palpi rather long, slightly ascending; second joint as long as the first; third linear, a little longer than the second. Abdomen extending as far as the hind wings. Legs moderately long and stout; hind tibiæ with four long spurs. Wings rather narrow. Fore wings straight in front; discal fold distinct; second inferior vein as far from the first as from the third; third nearly four times further from the fourth than from the first. Hind wings straight in front; first, second and third inferior veins connected at the base.

1. AGRISIUS GUTTIVITTA.

Argenteo-albus; palpi nigri, subtus albi; thorax e maculis nigris bifasciatus; femora tibiæque nigro vittata; tarsi nigri, albo fasciati; alæ anticæ basi nigro guttatæ, apice fusco vittatæ, posticæ fusco vittatæ.

Silvery white. Proboscis testaceous. Palpi black, white beneath; second joint white at the tip. Thorax with two bands of black spots, and with a black spot in the disk between them. Femora and tibiæ with black stripes; tarsi black, with white bands. Fore wings with black dots on the basal half; apical half with brown stripes on the veins; under side mostly brown. Hind wings with brown stripes, except towards the base above. Length of the body 5? lines; of the wings 17 lines.

a. North India. Presented by Capt. Parry.

Genus 51. AMASTUS.

Phægoptera, p., *Moriz; Herr.-Schæff.*

Palpi ascendentes, longiusculi; articulus 2us 3oque duplo longior; 3us parvus, conicus, 2o multo gracilior. Proboscis corporis

dimidio multo longior. Antennæ corpore paullo breviores. Abdomen alas posticas longe superans. Pedes longiusculi, fere nudi; tibiæ posticæ calcaribus quatuor sat longis. Alæ longiusculæ, sat angustæ. *Mas.*—Antennæ late pectinatæ. Sexualia longa; forceps valida, arcuata. *Fæm.*—Antennæ mediocriter pectinatæ.

Proboscis much more than half the length of the body. Palpi ascending, rather long; third joint small, conical, much more slender than the second, and about one-fourth of its length. Antennæ nearly three-fourths of the length of the body, pectinated in both sexes. Abdomen extending much beyond the hind wings. Legs rather long, nearly bare; hind tibiæ with four rather long spurs. Wings rather long and narrow, thinly pubescent. Fore wings with two superior veins; discal fold distinct in the discal areolet, and for a short distance beyond; first and second inferior veins nearly contiguous at the base; third four times further from the fourth than from the second. Hind wings with one superior vein, which at its tip is very near the discal fold; the latter is distinct along the whole length of the wing: first and second inferior veins almost contiguous at the base; third about six times further from the fourth than from the second. *Male.*—Antennæ rather deeply pectinated. Sexual appendages long; forceps stout, curved. *Female.*—Antennæ moderately pectinated.

1. AMASTUS COLLARIS.

Luteus; caput subtus et pectus antice rufescentia, illum antice album; palpi nigri, basi rufi; antennæ nigrae; thorax fascia antica arcuata vittisque duabus albis; abdomen rufescens, apicem versus nigrum fasciis albis, subtus album nigro marginatum; pedes nigri, femoribus subtus albidis; alæ subhyalinae, anticæ cervinae, posticæ albidæ.

Phægoptera collaris, Moriz; Herr.-Schæff. Lep. Exot. Sp. Ser. i. pl. 15, f. 63.

Luteous-tawny. Head beneath, and pectus in front reddish. Head white in front. Proboscis tawny. Palpi black, red at the base. Antennæ black. Thorax with a curved white band in front, and with two white stripes, which diverge hindward. Abdomen above reddish black, with white bands towards the tip, which is white; disk of the under side white, bordered with black. Legs black; femora whitish beneath. Wings subhyaline. Fore wings fawn-colour; veins tawny. Hind wings whitish; veins testaceous. Length of the body 8—10 lines; of the wings 26—30 lines.

a—d. Venezuela. From Mr. Dyson's collection.

Genus 52. AMERILA.

Group 1.

Mas et fœm. Proboscis longa, corporis dimidio longior. Palpi ascendentes, longiusculi; articulus 3us sublinearis, 2o duplo brevior vix gracilior. Antennæ simplices, corporis dimidio multo breviores. Abdomen alas posticas longe superans. Pedes longiusculi, fere nudi; tibiæ posticæ calcaribus quatuor longis. Alæ mediocriter latæ.

Body nearly linear and cylindrical. Proboscis not less than half the length of the body. Palpi long, ascending; third joint more than half the length of the second. Antennæ simple in both sexes, much more than half the length of the body. Abdomen extending much beyond the hind wings. Legs long; posterior tibiæ with four very long spurs. Wings long, partly hyaline or semi-hyaline. Fore wings slightly pointed; three superior veins; discal fold distinct; first, second and third inferior veins near together at the base; third more than thrice further from the fourth than from the first. Hind wings slightly convex in front; first and second inferior veins contiguous at the base; third more than four times further from the fourth than from the second.

A. Thorax posticus nigro maculatus.

A. Thorax rufo fasciatus. - - - - Astræa, *Drury*.

B. Thorax rufo non fasciatus. - - - - mauritia, *Cram.*

B. Thorax posticus nigro non maculatus. - Melanthus, *Cram.*

1. AMERILA ASTRÆA.

Var. *Thorax murinus, punctis nigris; abdomen supra rufum* (var. *albido-cinereum, basi anoque supra rubellis*), *subtus flavidum, lateribus punctis nigris; palpi rufi, apice nigri; pedes subcinerei, intus rufi; alæ anticæ albido murinæ, subdiaphanæ, costa, macula media apiceque fuscis, basi punctis duobus nigris; posticæ albido submurinæ, subdiaphanæ.*

Sphinx *Astreas*, *Drury*, *Ins.* ii. pl. 28, f. 4.

Noctua *Astrea*, *Fabr. Sp. Ins.* ii. 213, 21; *Mant. Ins.* ii. 137, 26;

Ent. Syst. iii. 2, 19, 35. *Gmel. ed. Syst. Nat.* i. 5, 2534, 593.

Glaucopis? *Astrea*, *Westw. Ed. Drury*, ii. pl. 28, f. 4.

Chelonia saucia, *Boisd. Voy. l'Astrolabe, Ent.* i. 214.

Lithosia Arthus *Bertrand, Guér. Voy. Duperrey, Atlas, Ins.* pl. 19, f. 5.

Chelonia Astræa, *Guér. Voy. Duperrey, Texte*, 284.

White. Head with a black dot on the vertex and another on the front. Proboscis tawny. Palpi red, with three black bands; a whitish streak beneath. Antennæ brown, red at the base. Thorax with fourteen black dots; prothorax with red borders. Pectus with three black spots on each side. Abdomen bright red above, with two rows of black dots along each side. Legs bright red; femora white beneath; anterior tibiæ and fore tarsi blackish above; fore femora streaked with brown beneath. Fore wings brown, white towards the base, which has three white spots; middle part nearly hyaline, except the borders and a streak across the tip of the discal areolet. Hind wings pale fawn-colour, whitish along the fore border and the interior border. Length of the body 8—10 lines; of the wings 20—26 lines.

- a. Australia. From the Voyage of H.M.S. Rattlesnake.
- b. Australia. From Mr. Hunter's collection.
- c. Australia. From Mr. Children's collection.
- d. Australia. From Mr. Milne's collection.

2. AMERILA MAURITIA.

Rufo-cervina; caput nigro quadripunctatum; palpi nigri, rufo bivittati; antennæ nigrae; thorax nigro decem maculatus; pectus nigro sexguttatum; pedes rufi; alæ anticæ basi nigro biguttatæ; posticæ albidæ.

Phalæna mauritia, Cram. Pap. Exot. iv. 105, pl. 345, f. B.

Arctia mauritia, Boisd. Faun. Ent. Mad. Bomb. et Maur. 86.

Phalæna vidua? Cram. Pap. Exot. iii. 127, pl. 264, f. C.

Pelochyta vidua? Hübn. Verz. Schmett. 172, 1772.

Guinea. Mauritius.

Reddish fawn-colour. Head with two black dots on the vertex and one on each side in front. Proboscis piceous. Palpi black, with two red bands. Antennæ black, fawn-colour at the base. Thorax with ten black dots. Pectus with about three black dots on each side. Abdomen red above, with two rows of black dots along each side. Legs red; a black dot on each coxa. Fore wings with two black dots at the base; disk more or less hyaline. Hind wings whitish, with a very slight tinge of fawn-colour. Length of the body 6—7½ lines; of the wings 16—20 lines.

- a, b. West Africa. From Mr. Hewitson's collection.
- c. Congo. Presented by Sir J. Richardson.
- d—f. Congo. Presented by E. Doubleday, Esq.
- g. ———? From Mr. Milne's collection.

3. AMERILA MELANTHUS.

Albida; thorax fascia antica rufa; abdomen rufum; alæ anticæ costæ bis triente apicali, triente apicali lituraque discali connexa fuscis, plaga magna discali limpida guttisque basi nigris, posticæ plus dimidio antico et apicali limbo apice fusco.

Phalæna Melanthus, Cram. Pap. Exot. iii. 166, pl. 286, f. B.

Rhodogastria Melanthus, Hübn. Verz. Schmett. (Phalænæ Venæ Hipocritæ Sphingiformes) 172, 1774.

Ceylon.

Group 2.

Mas et fœm. Corpus lineare, subcylindricum. Proboscis corporis dimidio non brevior. Palpi longiusculi, ascendentes; articulus 2us 1o multo longior, 3us minimus. Antennæ simplices. Abdomen alas posticas longe superans. Pedes mediocriter longi et graciles; tibiæ posticæ calcaribus quatuor parvis. Alæ sat longæ et angustæ, ex parte hyalinæ aut semihyalinæ.

Phægoptera, p., Boisd.; Herr-Schæff.

Body linear, nearly cylindrical. Proboscis not less than half the length of the body. Palpi rather long, ascending; second joint much longer than the first; third extremely minute. Antennæ simple in both sexes. Abdomen extending much beyond the hind wings. Legs moderately long and slender; hind tibiæ with four small spurs. Wings rather long and narrow, partly hyaline or semihyaline; discal fold indistinct; first and second inferior veins almost contiguous at the base; third about thrice further from the fourth than from the second. Hind wings convex in front; first inferior vein very near the second and the third, which are united at the base; fourth springing from the middle of the length of the discal areolet.

4. AMERILA ERYTHRONOTA.

Fœm. Testacea; subtus albida; palpi rufi, subtus albi; antennæ fusæ; abdomen supra rufum; pedes albi, femoribus anticis supra rufis apice cervinis, femoribus posterioribus apice tibiisque posterioribus basi tibiisque anticis cervinis; alæ anticæ fusco conspersæ, ex parte cervinæ, striga antica rufa maculaque maxima subapicali limpida; posticæ albæ, sublimpidæ.

Phægoptera erythronota, *Boisd*; *Herr.-Schæff. Lep. Exot. Sp.*
Ser. 1, pl. 14, f. 58 (1853).

Male. Gray, sprinkled with black. Head mostly yellow. Palpi red. Thorax with a yellow curved band, behind which are two red spots, and a larger one behind. Abdomen bright red, with a white spot at the base, white at the tip, and with a row of white dots along each side. Fore wings testaceous, with a few black streaks towards the base, with a hindward white stripe, and with a short oblique discal white band, both bordered with black. Hind wings white.

Venezuela.

Female. Testaceous, whitish beneath. Proboscis tawny. Palpi red, white beneath. Antennæ pale brown, red at the base. Abdomen red above. Legs white; fore femora red above, with fawn-coloured tips; fore tibiæ fawn-colour; posterior femora towards the tips and posterior tibiæ towards the base fawn-colour. Fore wings powdered with brown, partly fawn-colour; a red interrupted streak along part of the fore border, and a transverse red mark in the disk at one-fourth of the length; a white dot between this mark and the hind border; some red hairs at the base of the hind border; exterior border brown; a very large limpid brown-bordered spot beyond the middle, extending to the fore border, which there is white, and nearly to the hind border; veins testaceous, dotted with brown in the limpid part. Hind wings white, nearly hyaline, with reddish hairs along the inner border. Length of the body 5—7 lines; of the wings 15—18 lines.

Var. β. Fore wings with the transverse mark and the dot near the base yellow; exterior border with testaceous dots.

a. Rio Janeiro. From Mr. Stevens' collection.

b. Brazil. Presented by W. W. Saunders, Esq.

c. ———?

Genus 53. OPHARUS.

Mas. Corpus gracile. Proboscis longa. Palpi longi, graciles, porrecti, caput longe superantes; articulus 2us 1o multo longior; 3us linearis, 2o multo gracilior et paullo brevior. Antennæ mediocriter pectinatae. Abdomen alas posticas dimidio superans. Pedes longiusculi, sat graciles; tibiæ posticæ calcaribus quatuor longis. Alæ longæ, angustæ.

Male. Body slender. Proboscis long. Palpi long, slender, porrect, extending far beyond the head; second joint much longer

than the first; third linear, more slender and rather shorter than the second. Antennæ moderately pectinated. Abdomen extending for half its length beyond the hind wings. Legs rather long and slender; hind tibiæ with four long spurs. Wings long, narrow. Fore wings with the first and second inferior veins springing from a short common petiole, which is contiguous to the third; first curved forward; fourth rather remote from the third.

1. OPHARUS PROCROIDES.

Mas. *Obscure fusca; abdominis latera testaceo maculata; pedes longiusculi, sat graciles; alæ anticæ subtus basim versus testaceo notatæ; posticæ subtus basi albidæ.*

Male. Dark brown. Proboscis testaceous, long. Sides of the abdomen with testaceous spots, which increase in size towards the tip. Legs rather long and slender. Fore wings with a testaceous mark near the base beneath. Hind wings whitish towards the base beneath. Length of the body $6\frac{1}{2}$ lines; of the wings 18—20 lines.

a, b. Brazil. From M. Becker's collection.

c. Rio Janeiro. From Mr. Stevens' collection.

Genus 54. CARALES.

Corpus sat robustum. Proboscis mediocriter longa. Palpi longiusculi, ascendentes, fere nudi; articulus 2us 1o valde longior; 3us gracilis, lanceolatus, brevis. Antennæ longiusculæ, sat graciles. Abdomen alas posticas triente superans. Pedes longiusculi; tibiæ posticæ calcaribus quatuor longis. Alæ longæ, non latæ. Mas.—Antennæ subpectinatæ. Fœm.—Antennæ simplices.

Body moderately stout. Proboscis of moderate length. Palpi rather long, ascending, nearly bare; second joint very much longer than the first; third slender, lanceolate, about one-fourth of the length of the second. Antennæ rather long and slender. Abdomen extending for about one-third of its length beyond the hind wings. Legs rather long; hind tibiæ with four long spurs. Wings long, not broad. Fore wings with the first and second inferior veins almost contiguous at the base; first curved forward; third about thrice further from the fourth than from the second. Male.—Antennæ very minutely pectinated. Female.—Antennæ simple.

A. Abdomen maculatum.

A. Alæ anticæ ocellatæ.

A. Alæ posticæ non fasciatæ. - - - albicans, *Walk.*B. Alæ posticæ fasciatæ. - - - maculicollis, *Walk.*B. Alæ anticæ non ocellatæ. - - - phryganoides, *Walk.*B. Abdomen non maculatum. - - - abdominalis, *Walk.*

1. CARALES ALBICANS.

Mas. Albida, nigro maculata; antennæ fuscae; abdomen luteum, e maculis nigris trivittatum, subtus testaceum vitta dorsali maculari nigra; alæ anticæ ocellis angulosis incompletis fuscis maculisque costalibus obscurioribus, posticæ cinereo marginatæ.

Male. Whitish. Head with a black spot on the vertex. Proboscis tawny. Palpi with two black bands. Antennæ brown, whitish at the base. Thorax with a short black stripe and two black spots on each side. Abdomen above pale luteous, with three rows of black spots; under side pale testaceous, with one row of black spots. Tarsi brown. Fore wings with numerous brown oblique zigzag lines, which form imperfect ringlets, and with some darker brown spots along the costa, with one at the end of the discal areolet, and with some near the base and along the outer border. Hind wings with grayish borders. Length of the body 8 lines; of the wings 25 lines.

a. Venezuela. From Mr. Dyson's collection.

2. CARALES MACULICOLLIS.

Fœm. Albida; caput et palpi nigro maculata; antennæ fulvæ; thorax vittis duabus macularibus nigris; abdomen luteum, e maculis nigris trivittatum; pedes lutei, albido vittati nigroque maculati; alæ anticæ fasciis obliquis ocellaribus fuscis maculisque costalibus subquadratis fuscis albisque, posticæ costa fasciæque pallide fuscis.

Female. Whitish. Head with a black spot on the vertex and a smaller one in front. Proboscis tawny. Palpi pale luteous, with three black spots on each side. Antennæ tawny. Thorax with two stripes of black spots, clothed towards the abdomen with long testaceous hairs. Abdomen above and beneath pale luteous, with three rows of black spots. Legs pale luteous, with whitish streaks and with black spots. Fore wings with oblique brown bands, which

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form more or less regular ringlets, and along the costa with subquadrate alternately brown and white spots; a black dot at the base. Hind wings mostly pale brown along the border, and with an incomplete pale brown band in the disk. Length of the body 6 lines; of the wings 20 lines.

a. Brazil. From M. Becker's collection.

3. CARALES PHRYGANOIDES.

Fœm. Cana; antennæ ferrugineæ; thorax nigro maculatus fuscoque quadrivittatus; abdomen luteum, vittis macularibus nigris; pedes fusci, tibiis tarsisque albido fasciatis; alæ anticæ fusco variæ fasciisque duabus obliquis albidis, posticæ cinereæ fascia obliqua albida.

Female. Hoary. Proboscis tawny. Palpi with a luteous mark on each towards the base. Antennæ ferruginous, hoary at the base. Thorax with black dots, with two black spots in front, and with four brown stripes. Abdomen pale luteous, with a stripe of black spots above, with one on each side, and with one beneath; the dorsal stripe shortened in front. Legs brown; tibiæ and tarsi with whitish bands; fore coxæ partly luteous. Fore wings with various minute brown marks, which are partly confluent, and with two oblique irregular and incomplete whitish bands. Hind wings gray, with an irregular oblique whitish band, whitish towards the base beneath where the band is most apparent. Length of the body 7 lines; of the wings 22 lines.

a. ———? Presented by E. Doubleday, Esq.

4. CARALES ABDOMINALIS.

Cinerea; antennæ nigræ, basi flavæ; thorax fusco trivittatus; abdomen luteum, basi fuscum, subtus testaceum apice fuscum; tibiæ fusco fasciatæ; tarsi nigricantes fasciis albidis; alæ anticæ strigis ocellisque obscurioribus.

Gray. Head pale luteous behind. Proboscis tawny. Third joint of the palpi pale yellow towards the base. Antennæ black, pale yellow at the base beneath. Thorax with three brown stripes. Abdomen above luteous, brown at the base; under side testaceous, with a brown tip. Legs with testaceous tomentum; tibiæ with a brown band; tarsi blackish, with whitish bands. Fore wings pale

cinereous, with various grayish streaks and ringlets. Hind wings gray. Length of the body 5 lines; of the wings 13 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 55. HALESIDOTA.

Corpus robustum. Proboscis longa. Palpi validi, porrecti, non longi; articulus 2us 1o multo longior; 3us conicus, minimus. Abdomen alas posticas triente superans. Pedes validi; tibiæ posticæ calcaribus quatuor mediocriter longis. Alæ longæ, angustæ. *Mas.*—Antennæ subpectinatae. *Fœmina.*—Antennæ serratae.

Halesidota, Hübn. Verz. Schmett. 170.

Phægoptera, p., Boisd. Herr.-Schæff.

Phalæna, p., Abbot & Smith.

Lophocampa, Harris, Ins. Massachus. 258.

Body stout. Proboscis long. Palpi stout, porrect, not long; second joint much longer than the first; third conical, very minute. Abdomen extending for about one-third of its length beyond the hind wings. Legs stout; hind tibiæ with four moderately long spurs. Wings long, narrow. Fore wings with the first and second inferior veins contiguous at the base; third about four times further from the second than from the fourth. *Male.*—Antennæ slightly pectinated. *Female.*—Antennæ serrated.

North America.

A. Alæ anticæ quadrifasciatæ.

A. Alæ anticæ fasciis non macularibus. - tessellaris, Abbot.

B. Alæ anticæ fasciis macularibus. - annulifascia, Walk.

B. Alæ anticæ bifasciatæ. - - - fulvo-flava, Walk.

1. HALESIDOTA TESSELLARIS.

Cristata flavescens; alæ angustatæ, anticæ fasciis tessellatis saturatioribus.

Phalæna tessellaris, Abbot & Smith, Nat. Hist. Lep. Ins. Georgia, ii. 149, pl. 75.

Halesidota tessellaris, Hübn. Verz. Schmett. (*Phalænæ Veræ Hipocritæ Sphingiformes*), 170, 1753.

Var. *Mas.* et *fœm.* *Lutea*; facies nigra; palpi nigri, luteo bifasciati; antennæ nigræ; prothorax viridi fasciatus; mesothorax viridi trivittatus; abdomen subtus testaceum; pedes testacei, nigro fasciati; alæ anticæ pallide testaceæ fasciis quatuor obscurioribus nigro marginatis et intersectis.

Male and fem. Pale luteous. Face black. Proboscis ferruginous. Palpi black, with two luteous bands. Antennæ black, luteous at the base. Prothorax with a green band along the hind border. Mesothorax with three green stripes, the lateral pair diverging hindward; a black streak on each side near the fore wing. Abdomen testaceous beneath. Legs testaceous; knees, tibiæ and tarsi with black bands. Fore wings pale testaceous, with four testaceous bands, which are bordered and intersected with black; the first and the second are double in front, the third does not extend far from the hind border, and the fourth is forked in front. Length of the body 6—8 lines; of the wings 20—22 lines.

a. United States. Presented by E. Doubleday, Esq.

b. United States.

c, d. United States. From Mr. Milne's collection.

e, f. Mexico. Presented by E. Doubleday, Esq.

g. ———? Presented by W. F. Evans, Esq.

h. Venezuela. From Mr. Dyson's collection.

The preceding description is of the Venezuela specimen, which is much darker than the others; the Mexican one resembles it most in that character.

2. HALESIDOTA FULVO-FLAVA.

Mas. et fœm. *Testacea; thorax maculis duabus anticis vittisque duabus fulvis; tibiæ tarsique antica fulva; alæ anticæ flavæ fulvo bifasciatæ, aut fulvæ flavo maculatæ; posticæ albidæ.*

Testaceous, paler beneath. Proboscis tawny. Thorax with two tawny stripes, which converge hindward, and with two tawny spots in front between the stripes. Femora and tibiæ hairy; fore femora and fore tibiæ tawny above. Fore wings yellow, with a tawny spot at the base, with two oblique tawny bands, with darker borders; these bands are partly connected, and the inner one is especially irregular and ramose, being forked in front, and dilated in the disk towards the base, and emitting a branch to each border. Hind wings whitish, with a slight testaceous tinge. Length of the body 6—7 lines; of the wings 16—18 lines.

Var. β. Fore wings tawny, with yellow spots at the base, at the tips, along the costa, and forming an oblique band beyond the middle.

a. Nova Scotia. From Lieut. Redman's collection.

b, c. North America.

d. North America. From Mr. Milne's collection.

3. *HALESIDOTA ANNULIFASCIA*.

Mas. et fœm. *Pallide testacea; antennæ fulvæ; thorax fulvo bivittatus; alæ anticæ fulvo punctatæ et e maculis albidis fulvo marginatis quadrifasciatæ; posticæ albidæ.*

Pale testaceous. Proboscis and antennæ tawny. Thorax with two tawny stripes, which converge hindward. Fore wings with tawny punctures, which are most numerous, and partly confluent on the disk beyond the middle, and with four oblique bands of whitish tawny-bordered spots; veins tawny. Hind wings whitish, with a slight testaceous tinge. Length of the body 6—8 lines; of the wings 18—22 lines.

a—d. United States. Presented by E. Doubleday, Esq.

Mexico.

4. *HALESIDOTA BICOLOR*.

Mas. *Rufo-fulva; caput et pectus alba; antennæ supra albidæ; thorax albo trivittatus; alæ anticæ testacæ submaculatæ, posticæ albæ.*

Male. Reddish tawny. Head white. Proboscis tawny. Antennæ whitish above. Thorax with three white stripes. Pectus white. Fore femora and fore tibiæ thickly clothed with white hairs. Fore wings testaceous, with indistinct hyaline spots. Hind wings white. Length of the body 7 lines; of the wings 17 lines.

The specimen of this species is injured, and it may be a variety of *H. annulifascia*.

a. Mexico. Presented by E. Doubleday, Esq.

West Indies.

- | | | |
|---|-----------|-----------------|
| A. Alæ anticæ non maculatæ nec vittatæ. | - | insulata, Walk. |
| B. Alæ anticæ maculatæ. | - - - - - | palpalis, Walk. |
| C. Alæ anticæ vittatæ. | - - - - - | strigosa, Walk. |

5. *HALESIDOTA INSULATA*.

Fœm. *Pallide testacea; caput luteo fasciatum; palpi apice nigrificantes; antennæ nigrae; abdomen supra luteum; pedes nigrificantes, coxis subtus luteis.* Mas.—*Femora lutea, apice nigra, antica supra nigrificantia.* Fœm.—*Abdomen vittis guttularibus nigris; femora subtus albido testacea.*

Fem. Pale testaceous, paler beneath. Head with a pale luteous band behind the antennæ. Proboscis tawny. Palpi blackish above towards the tips. Antennæ black, pale luteous at the base. Abdomen above luteous. Legs blackish; coxæ luteous. Hind wings a little paler than the fore wings. *Male*.—Abdomen unspotted. Femora luteous, with black tips; fore femora blackish above, except towards the base. *Fem.*—Abdomen with rows of black dots; femora blackish above, whitish testaceous beneath. Length of the body 5—6 lines; of the wings 14—15 lines.

a—c. Jamaica. From Mr. Gosse's collection.

d. Jamaica.

Var. β. Isabellina; palpi supra nigri; antennæ nigræ; abdomen supra luteum, vittis guttularibus nigris; pedes femoribus tibiisque apice cinereis, antici nigricantes.

Cream-colour. Palpi black above and towards the tips. Antennæ black, cream-colour at the base. Abdomen luteous above, with three rows of black dots. Fore legs blackish above; middle tibiæ and tips of the posterior femora and of the hind tibiæ gray. Length of the body 4—5 lines; of the wings 14—16 lines.

Var. γ like *var. β*. Abdomen without the middle row of black dots.

a, b. St. Domingo. From Mr. Tweedie's collection.

c. St. Domingo. From Mr. Hearne's collection.

d. Venezuela. From Mr. Dyson's collection.

e. Santarem, Brazil. From Mr. Bates' collection.

6. HALESIDOTA PALPALIS.

Mas. *Obscure fusca; caput supra albidum, fusco bimaculatum; palpi apices versus testaceo fasciati; antennæ nigræ; thorax maculis sex albis luteo marginatis; pectus abdomen et pedes lutea; tibiæ tarsique antica fusca, albo fasciata; tibiæ tarsique posteriora fusco fasciata, alæ anticæ albo testaceoque maculatæ, posticæ luteæ.*

Male. Deep brown. Vertex and front whitish, with two brown spots. Proboscis piceous. Palpi with a testaceous band near the tips. Antennæ black. Thorax with six white luteous-bordered spots, two in front, and two on each side by the wings, the hind pair elongated. Pectus, abdomen and legs luteous. Fore tibiæ and fore tarsi brown, the former and the fore metatarsus each with a broad white band; posterior tibiæ and posterior tarsi with brown bands.

Fore wings with four clusters of white and testaceous spots, one at the base, one on each border before the middle, and the largest one extending hindward from the tip to the inner angle; the testaceous spots are smaller and less numerous than the white spots which mostly enclose them. Hind wings luteous. Length of the body 6 lines; of the wings 16 lines.

a. Jamaica. From Mr. Gosse's collection.

7. HALESIDOTA STRIGOSA.

Fusca; caput albo fasciatum; palpi subtus et apice albidii; thorax albido quadrivittatus, antice rufo-albo marginatus et univittatus; pectus albidum, fusco bifasciatum; abdomen coccineum, e maculis nigris bivittatum, apice nigro, subtus albidum vittis quatuor macularibus nigris; pedes albidii fusco vittati, tibiis rufo vittatis; alæ anticæ albido strigatæ; posticæ sublimpidæ fusco marginatæ.

Head and thorax brown above. Head whitish about the eyes, and with a whitish band on the vertex. Palpi brown, whitish beneath and towards the tips. Antennæ whitish, with brown branches. Pectus whitish, with two brown bands. Thorax with four whitish stripes; fore part bordered with reddish white, and with one stripe of the same colour. Abdomen crimson, black at the tip, and with a row of black spots along each side; under side whitish, with four rows of black spots. Legs whitish; femora and tibiæ striped with brown; tibiæ striped with red. Fore wings brown, with very numerous whitish streaks. Hind wings almost limpid, with more or less broad brownish borders. Length of the body 5—7 lines; of the wings 16—22 lines.

a, b. St. Domingo. From Mr. Tweedie's collection.

South America.

A. Alæ non virides.

A. Caput non album.

A. Thorax non vittatus, nec maculatus.

a. Thorax testaceus.

i. Alæ ocellatæ. - - - strigulosa, Walk.

ii. Alæ non ocellatæ.

* Alæ non fasciatæ.

† Alæ punctatæ. - - - bipunctata, Walk.

†† Alæ non punctatæ. - - - cornea, Moriz.

** Alæ fasciatæ. - - - annulosa, Walk.

b. Thorax cervinus. - - - specularis, Boisd.

- B. Thorax vittatus.
- a. Thorax nigro-fuscus, albo bivittatus. histrionica, *Boisd.*
 - b. Thorax fuscus, nigro trivittatus. - nemophila, *Boisd.*
 - c. Thorax luteus, subpurpureo bivittatus. coprophora, *Moriz.*
 - d. Thorax testaceus, fusco bivittatus. - - Alsus, *Cram.*
 - e. Thorax testaceus, viridi trivittatus. interlineata, *Walk.*
 - f. Thorax albidus, fusco bivittatus. - cinerascens, *Walk.*
 - g. Thorax albus, fusco 4-maculatus. - - Pica, *Walk.*
- c. Thorax maculatus.
- a. Thorax nigro-fuscus, luteo maculatus. flavo-punctata, *MSS.*
 - b. Thorax fusco-cinereus, luteo maculatus. diminuta, *Walk.*
 - c. Thorax cervinis guttis nigris. - - cinerea, *MSS.*
 - d. Thorax fuscus, luteo bivittatus. - suffusa, *Boisd.*
 - e. Thorax testaceus, nigro guttatis. - degenera, *Walk.*
- B. Caput album.
- A. Thorax luteus. - - - - aconia, *Moriz.*
 - B. Thorax albus. - - - - Eridanus, *Cram.*
- B. Alæ virides. - - - - thalassina, *Boisd.*

8. HALESIDOTA STRIGULOSA.

Fœm. Testacea; abdomen supra subluteum apice et subtus albidum; pedes albidi; alæ anticæ strigis ocellisque fulvis; posticæ albidæ.

Fem. Pale testaceous. Proboscis testaceous. Palpi and antennæ paler. Abdomen above slightly luteous, whitish towards the tip and beneath. Legs whitish. Fore wings with slight pale tawny streaks, which are indistinct towards the base; slightly convex in front; each areolet with two or three angular streaks towards the base, and with one elongated subfusiform ringlet towards the tip; a slight pale brown discal streak behind the discal areolet; veins pale tawny. Hind wings whitish. Length of the body 6—7 lines; of the wings 18 lines.

Var. β. Testaceous. Streaks of the fore wings with more obtuse and more rounded angles; fusiform ringlets shorter and more irregular.

a. *Parà.* Presented by J. P. G. Smith, Esq.

b. ———? From Mr. Milne's collection.

9. *HALESIDOTA BIPUNCTATA*.

Mas. *Testacea; palpi fusci, basi testacei; abdomen supra luteum, basi apiceque testaceum; pedes anteriores supra fuscescentes; alæ anticæ punctis obscurioribus; posticæ albidæ.*

Male. Testaceous. Proboscis tawny. Palpi brown, testaceous at the base. Abdomen above pale luteous, testaceous at the base and at the tip. Anterior legs brownish above. Fore wings minutely flecked with darker testaceous; a blackish dot in front of the tip of the discal areolet. Hind wings whitish. Length of the body 5 lines; of the wings 12 lines.

a. Parà. Presented by J. P. G. Smith, Esq.

10. *HALESIDOTA ANNULOSA*.

Mas. et fœm. *Testacea; abdomen pallide luteum; alæ anticæ fusco bifasciatæ; posticæ margaritacæ, sublimpidæ. Fœm.—Thorax fusco bifasciatus.*

Male and fem. Testaceous, whitish testaceous beneath. Antennæ whitish above. Abdomen pale luteous, except towards the base. Fore wings with two pale brown bands, one irregular and indistinct, at a little before one-third of the length of the wing, the other regular, distinct and oblique at a little before two-thirds of the length; surface covered with oblique bands of irregular pale brown ringlets, one of which near the tip of the wing has a brown dot on its inner border; veins tawny. Hind wings pearly white, semi-transparent. *Fem.*—Thorax with two indistinct pale brown stripes, converging hindward. Length of the body 4—5 lines; of the wings 11—15 lines.

a. Venezuela. From Mr. Dyson's collection.

b. Parà. Presented by J. P. G. Smith, Esq.

c. Parà. From Mr. Steven's collection.

11. *HALESIDOTA ALSUS*.

Mas et fœm. *Testacea; thorax fusco bivittatus; tibiæ tarsique antica supra fusca; alæ anticæ fasciis plurimis angulosis et ex parte ocellaribus fulvis. Mas.—Tarsi intermedii fusco fasciati. Fœm.—Thorax antice nonnunquam fusco quadriguttatus.*

Phalæna Alsus, *Cram. Pap. Exot.* ii. 26, pl. 113, f. E.

Halesidota Alsus, *Hübner. Verz. Schmett.* (*Phalænæ Veræ Hipocritæ Sphingiformes*) 170, 1755.

Surinam.

Male and female. Testaceous. Proboscis tawny. Thorax with two indistinct brown stripes which converge towards the hind border. Fore tibiæ and fore tarsi brown above. Fore wings with numerous oblique zigzag tawny more or less parallel bands; these towards the base are irregular and form ringlets; some of them are occasionally partly brown, especially towards the tips of the wings, and they form a brown mark by the tip of the discal areolet. Hind wings whitish. Length of the body 6—7 lines; of the wings 18—22 lines.

Male. Antennæ with brown plumes. Middle tarsi with brown bands. *Female.*—Thorax in front with four brown dots, which are occasionally obsolete.

a—c. Venezuela. From Mr. Dyson's collection.

d. Santa Fé de Bogotá. From Mr. Isaacson's collection.

e. Santa Fé de Bogotá. Presented by E. Doubleday, Esq.

12. HALESIDOTA INTERLINEATA.

Testacea; frons nigra; palpi nigri, luteo bifasciati; antennæ nigrae; thorax viridi trivittatus; abdomen supra luteum, nigro bivittatum; pedes nigro varii; alæ anticæ nigro notatæ; posticæ subhyalinæ, testaceo marginatæ.

Testaceous. Front black. Proboscis tawny. Palpi black, with two luteous bands. Antennæ black, testaceous at the base. Thorax with three green stripes, the middle one a little in advance of the lateral pair, which diverge towards the hind border. Abdomen luteous above, with an interrupted slender black stripe along each side. Coxæ, femora and tibiæ with black marks; tarsi luteous, with black bands. Fore wings with four black marks along the costa; first, second and third marks with luteous streaks; first and second connected with double slender black streaks, which are intersected with black and extend to the hind border; first at the base of the wing; second beyond the middle, occasionally forked in front; third and fourth very small, having between them a single slender zigzag black streak, which extends to the hind border. Hind wings nearly hyaline, with testaceous borders; hind border slightly concave. Length of the body 7—8 lines; of the wings 18—21 lines.

a. Brazil? From M. Becker's collection.

b, c. Brazil? Presented by E. Doubleday, Esq.

13. *HALESIDOTA FLAVOPUNCTATA*.

Mas. *Nigro-fusca, luteo varia; abdomen apicem versus luteum; alæ anticæ albæ aut rufo-fuscæ, fasciis fuscis luteo variis; posticæ albidæ aut subcinereæ.*

Chelonia flavopunctata, MSS.

Male. Var. α. Blackish brown. Head luteous by the mouth, and with a luteous spot on each side beneath the antennæ. Proboscis ferruginous. Palpi with a luteous spot on each outer side, and with a pale testaceous tip. Thorax with two bands of luteous spots, and with a large luteous tuft on each side behind. Abdomen above luteous towards the tip and along each side, with the exception of a row of blackish brown spots; under side with a stripe of luteous spots along each side and with whitish bands. Legs partly clothed with whitish hairs; coxæ mostly luteous. Fore wings white, with five oblique irregular bands of luteous brown-bordered spots; veins blackish brown. Hind wings whitish, tinged with brown at the tips beneath.

Var. β. Luteous part of the abdomen not extending so far towards the base on each side. Hind wings gray, with brown luteous-spotted borders.

Var. γ. Hind wings gray, excepting a whitish band with grayish streak.

Var. δ. Middle white part of the fore wings clouded with brown. Hind wings gray, with whitish spots.

Var. ε. Fore wings pale reddish brown, with blackish brown bands, which here and there contain luteous spots. Hind wings grayish, brownish about the borders.

Var. ζ like *var. ε*. Spots of the fore wings mostly white. Length of the body $6\frac{1}{2}$ —9 lines; of the wings 19—26 lines.

a—f. Brazil? From M. Becker's collection.

14. *HALESIDOTA HISTRIONICA*.

Fœm. *Nigro-fusca; caput luteo varium; thorax albo bivittatus et e maculis luteis trifasciatus; abdomen maculis lateralibus albis luteisque, triente apicali lutea, ventre albida; alæ anticæ fasciis tribus albis tribusque macularibus luteis; posticæ cinereo albido maculatæ.*

Phægoptera histrionica, Boisd. Herr.-Schæff. Lep. Exot. Sp. Ser. 1, pl. 15, f. 68.

Fem. Blackish brown. Head luteous behind and with four luteous spots, two on the vertex and two on the front. Proboscis ferruginous. Palpi with a small luteous spot on each outer side. Thorax with three bands of luteous spots, and with two white stripes which are connected in front and diverge hindward; hind border with a tuft of luteous hairs on each side, and between them a tuft of longer brown hairs. Abdomen above with white and luteous spots along each side; apical third part luteous; under side whitish. Fore coxæ and fore femora partly luteous. Fore wings with three irregular and oblique bands of small luteous spots, and with three irregular white bands; the first mostly along the hind border; the second forming an angle in the disk before the middle, its sides extending to the costa; third zigzag, forked in front. Hind wings grayish brown, with whitish spots. Length of the body 11 lines; of the wings 28 lines.

a. Brazil. Presented by W. W. Saunders, Esq.

15. *HALESIDOTA CINEREA.*

Mas et fœm. *Cervina, subtus testacea; caput et thorax anticus nigro guttata; palpi nigro vittati; abdomen nigro fasciatum et e guttis nigris quadrivittatum; alæ anticæ basi nigro guttatæ.*

Male and fem. Fawn-colour, testaceous beneath. Head above with black dots. Proboscis ferruginous. Palpi with black stripes. Thorax in front with six black dots. Abdomen very hairy towards the base, with black bands, and on each side with two rows of black dots. Fore wings with black dots at the base. Hind wings much paler than the fore wings. Length of the body 6—8 lines; of the wings 22—26 lines.

a—c. Brazil. From M. Becker's collection.

d, e. Venezuela. From Mr. Dyson's collection.

16. *HALESIDOTA DIMINUTA.*

Mas. *Fusco-cervina; caput apud oculos luteum; thorax luteo maculatus; abdomen supra luteum, maculis dorsalibus triangularibus nigro-fuscis; alæ anticæ cervinæ fasciis duabus fuscis cervino guttatis; posticæ cinereæ.*

Male. Brownish fawn-colour. Head luteous about the eyes. Proboscis tawny. Antennæ brown, luteous at the base. Thorax with six or eight luteous dots. Abdomen luteous above, with a tri-

angular blackish brown spot on each segment. Fore coxæ luteous. Fore wings fawn-colour, with a luteous dot at the base and with three slight oblique pale brown bands which contain a few luteous dots; the middle one forked in front. Hind wings gray. Length of the body 5 lines; of the wings 16 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

17. *HALESIDOTA DEGENEREA*.

Fœm. *Testacea, nigro guttata; antennæ fuscae; abdomen disco et guttis lateralibus fuscis; pedes cervini; alæ subcinereæ, ad costam testaceæ; anticæ basi nigro guttatæ.*

Fem. Testaceous. Head with two black dots, one between the antennæ and one behind. Proboscis tawny. Palpi with two black dots on the outer side. Antennæ brown, testaceous at the base. Thorax with a band of black dots in front; disk fawn-colour, with long hairs. Abdomen above with a dark brown disk, and with a row of dark brown dots along each side. Legs fawn-colour; coxæ testaceous; fore coxæ with a brown mark on each near the base. Wings grayish, testaceous along the costa; veins tawny. Fore wings with black dots at the base. Hind wings hardly paler than the fore wings. Length of the body 5 lines; of the wings 15 lines.

a. Venezuela. From Mr. Dyson's collection.

18. *HALESIDOTA CINERASCENS*.

Albida; palpi apice fusci; antennæ nigrae; thorax fusco bivittatus; abdomen supra luteum, basi vittisque tribus macularibus fuscis; ventre fusco fasciis albis maculisque lateralibus luteis; pedes cervini; alæ subcinereæ ad costam testaceæ; anticæ basi nigro guttatæ.

Whitish. Head behind testaceous, with a brown dorsal spot. Proboscis tawny. Palpi with brown tips. Antennæ black, white above. Thorax with two pale brown stripes, which are curved and connected in front and diverge hindward. Abdomen pale luteous above, brown at the base, and with three rows of brown spots; under side brown, with white bands, which are dilated on each side, where there is a row of luteous spots. Hind tibiæ, except towards the base and tarsi, brown. Fore wings with brown marks of various size and form, and with a luteous dot and a smaller blackish dot at the base. Hind wings gray, mostly white along the fore border and partly whitish beneath. Length of the body 8 lines; of the wings 24 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

19. *HALESIDOTA PICA*.

Mas. *Alba, nigro maculata; palpi et antennæ nigra; thorax nigro quadrivittatus; abdomen nigrum, luteo bivittatum, disco subtus albo; pedes nigri, albo fasciati; alæ anticæ nigro maculatæ; posticæ margaritacæ nigro marginatæ.*

Male. White. Head with a black spot on the vertex; hind part luteous on each side. Face and under side black. Proboscis tawny. Palpi black. Antennæ black, with two white streaks above, one near the base, the other near the tips. Thorax with a large black spot in front and a smaller one on each side, and with four black stripes, which are connected hindward. Abdomen black, with a luteous stripe on each side; disk beneath white. Legs black, with white bands. Fore wings with several black spots; the larger spots along the borders, the smaller ones chiefly in the disk. Hind wings nearly white, mostly black along the fore border and the inner border. Length of the body $5\frac{1}{2}$ lines; of the wings 16 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

20. *HALESIDOTA NEMOPHILA*.

Fusca; thorax nigro trivittatus, postice luteum; abdomen luteum, disco nigro; alæ anticæ strigis fuscis, necnon maculis tribus strigisque transversis nigris; posticæ pallide fuscae, fascia maculari nigro-fusca, margine interiore luteo.

Phægoptera nemophila, Boisd. Herr.-Schæff. Lep. Exot. Sp. Ser. 1, pl. 14, f. 60 (1853).

Brown. Thorax with three black stripes, luteous towards the abdomen. Abdomen luteous; disk black. Fore wings with dark brown longitudinal streaks, with large black spots along the costa, and with three slender transverse black streaks by the middle of the inner border. Hind wings very pale brown, with a macular blackish brown band, luteous along the inner border.

Venezuela.

21. *HALESIDOTA SPECULARIS*.

Fœm. *Cervina; palpi rufi; abdomen rufum, apice album; alæ anticæ fuscescentes, apice margineque exteriori purpureo-rufis, margine interiore testaceo, macula obliqua maxima limpida, costa ex parte flava, basi rufa; posticæ albidæ, apud margines rufæ.*

Phægoptera specularis, *Boisd. Herr.-Schæff. Lep. Exot. Sp. Ser. 1*, pl. 14, f. 59 (1853).

Female. Fawn-colour. Palpi red. Abdomen red; tip white. Fore wings brownish, pale purplish red at the tips and along part of the exterior border, testaceous along the inner border. Costa red towards the base, yellow opposite a very large limpid oblique spot beyond the middle, and occupying one-third of the surface. Hind wings whitish, pale red along the borders.

Venezuela.

22. *HALESIDOTA COPROPHORA.*

Mas. *Lutea; thorax vittis duabus obliquis subpurpureis; abdomen apice album; alæ anticæ subpurpureæ; fascia obliqua subapicali pallidior, costa margineque interiore luteis; posticæ albidæ.*

Phægoptera coprophora, *Moriz, Herr.-Schæff. Lep. Exot. Sp. Ser. 1*, pl. 15, f. 62.

Male. Luteous. Thorax with two oblique lilac stripes. Abdomen white at the tip. Fore wings lilac, with an oblique subapical paler band, luteous along the costa and along the inner border. Hind wings whitish.

Venezuela.

23. *HALESIDOTA ACONIA.*

Fœm. *Lutea; caput album; thorax fascia vittisque tribus albis; abdomen apice nigro notatum, lateribus vittaque apicali albis; alæ anticæ albido subpurpureæ, fascia albido-testacea obliqua undulata subapicali, margine exteriori testaceo; postice pallidiores, marginibus albis.*

Phægoptera aconia, *Moriz, Herr.-Schæff. Lep. Exot. Sp. Ser. 1*, pl. 15, f. 64.

Fem. Luteous. Head white. Thorax with a white band in front and with three white stripes. Abdomen white along each side, with a white stripe at the tip, which is marked with black. Fore wings whitish lilac, testaceous along the exterior border, and with a whitish testaceous oblique undulating subapical band. Hind wings paler whitish lilac, with white borders.

Venezuela.

24. *HALESIDOTA SUFFUSA*.

Fœm. *Fusca; thorax luteo bivittatus; abdomen luteum, e maculis testaceis nigro marginatis bivittatum; alæ anticæ fasciis quinque undulatis testaceis; posticæ albidae, cinereo marginatæ.*

Phægoptera suffusa, *Boisd. Herr.-Schæff. Lep. Exot. Sp. Ser. 1*, pl. 15, f. 67.

Fem. Brown. Thorax with a luteous stripe on each side. Abdomen luteous, with a row of testaceous black-bordered spots along each side. Fore wings with five undulating testaceous bands; third and fourth bands enclosing a rather darker testaceous space, which occupies about one-third of the length of the wing, and includes a brown lunar mark at the tip of the discal areolet; fourth band double, the inner side being brighter than the outer. Hind wings whitish, with gray borders.

Venezuela.

25. *HALESIDOTA CORNEA*.

Testacea; alæ albido hyalinæ, marginibus testaceis. Mas.—Obscurior; abdominis discus rufus; alæ marginibus testaceis latioribus, anticæ striga obliqua albida subapicali.

Phægoptera cornea, *Moriz. Herr.-Schæff. Lep. Exot. Sp. Ser. 1*, pl. 14, f. 61, 62 (1853).

Testaceous. Wings whitish hyaline, with testaceous borders. *Male.*—Darker than the female. Disk of the abdomen red. Wings with broad testaceous borders. Fore wings with an oblique whitish subapical streak.

Venezuela.

26. *HALESIDOTA THALASSINA*.

Fœm. *Lutea; caput antice album; antennæ ferruginæ; thorax fascia antica vittisque duabus albis; femora subtus alba; alæ virides nigro venosæ, anticæ basi albido-luteæ nigroque guttatæ.*

Phægoptera thalassina, *Boisd. Herr.-Schæff. Lep. Exot. Ser. 1*, pl. 15, f. 66.

Fem. Luteous. Front and face white. Proboscis tawny. Antennæ ferruginous, luteous at the base. Thorax with a white band in front, white about the shoulders, and with two white stripes which diverge hindward. Pectus with a white spot in front.

Femora white beneath. Wings sea-green, minutely squamose; veins black. Fore wings without hairs, except along the cilia, which is testaceous, and at the base, which is whitish and partly luteous, and adorned with five black dots. Hind wings mostly bare, but with testaceous hairs along the hind border, and on one-third of the surface from the inner border. Length of the body 10? lines; of the wings 34 lines.

Venezuela.

a. ———?

27. HALESIDOTA ERIDANUS.

Alba; abdomen fasciis luteis; alæ venosæ.

Phalæna Noctua Eridanus, *Cram. Pap. Exot.* i. 107, pl. 68, f. G.

Hypercompa exsignata Eridane, *Hübner. Samml. Exot. Schmett.* i.

Lep. iii. *Phalænæ*, ii. *Veræ*, vii. *Hypercompæ A. Exsignatæ*, b. f. 1—4.

Ecpantheria Eridane, *Hübner. Verz. Schmett.* 183, 1888.

Surinam.

Country unknown.

28. HALESIDOTA CATENULATA.

Testacea; alæ anticæ strigis plurimis transversis undatis aut semiocellaribus pallide fuscis; posticæ albæ.

Hipocrita glaucopoides catenulata, *Hübner. Samml. Exot. Schmett.* i.

Lep. ii. *Bomb.* ii. *Veræ*, vi. *Hipocritæ B. Glaucopoides*, a. f. 1—4.

Halesidota catenula, *Hübner. Verz. Schmett.* (*Phalænæ Veræ Hipocritæ Sphingiformes*), 170, 1754.

Nearly allied to *H. annulosa*.

29. HALESIDOTA ATOMOSA.

Fœm. Testacea; palpi fusco strigati; alæ anticæ guttis sparsis nigricantibus.

Allied to *H. strigulosa*.

Fem. Testaceous, paler beneath. Proboscis tawny. Palpi with a brown streak on the outer side. Coxæ very pilose. Fore wings thinly and irregularly covered with very minute blackish dots. Hind wings a little paler than the fore wings. Length of the body 6 lines; of the wings 17 lines.

a. ———?

Genus 56. CANOPUS.

Fœm. Corpus subfusiforme. Caput parvum. Proboscis corporis dimidio non longior. Palpi longiusculi, subascendentes; articulus 2us subarcuatus, 1o vix longior; 3us subclavatus, 2o brevior. Antennæ simplices, graciles, corporis dimidio multo longiores. Abdomen alas posticas paullo superans. Pedes longiusculi, sat graciles; tibiæ posticæ calcaribus quatuor longissimis. Alæ sat longæ et angustæ.

Fem. Body nearly fusiform. Head small. Proboscis about half the length of the body. Palpi rather long, slightly ascending; second joint slightly curved, hardly longer than the first; third subclavate, shorter than the second. Antennæ simple, slender, full three-fourths of the length of the body. Abdomen extending a little beyond the hind wings. Legs rather long and slender; hind tibiæ with four very long spurs. Wings rather long and narrow. Fore wings nearly straight in front; discal fold distinct; first and second inferior veins nearly united at the base; third more than six times further from the fourth than from the second. Hind wings slightly convex in front; their veins like those of the fore wings in structure.

1. CANOPUS BUBO.

Fœm. *Albus; palpi nigro bifasciati; antennæ nigræ; thorax nigro 14-maculatus; abdomen e maculis nigris bivittatum; femora supra lutea, antica apice nigra; tarsi subtus fulvi; alæ anticæ basi nigro triguttatæ.*

Female. White. Proboscis tawny. Palpi with three black bands. Antennæ black, white towards the base. Prothorax with six black spots, two in the disk, and two on each side. Mesothorax with a band of six black spots between the fore wings, and with four spots behind arranged in a square. Abdomen with a row of black spots on each side above and beneath. Femora luteous above; tarsi tawny beneath; anterior femora with black tips. Fore wings with three black dots at each base. Length of the body 9 lines; of the wings 28 lines.

a. Congo. Presented by Sir J. Richardson.

2. CANOPUS RUFIFEMUR.

Fœm. *Albus; palpi nigro trifasciati; antennæ fulvæ; prothorax nigro biguttatus; abdomen e guttis nigris bivittatum; tarsi subtus fulvi; femora antica supra rufa; alæ anticæ ad costam subtestaceæ.*

Female. White. Proboscis and antennæ tawny. Palpi with three black bands on the upper side. Thorax with a slight testaceous tinge on each side. Prothorax with a black dot on each side. Pectus with a black spot on each side. Abdomen with a row of black dots on each side above and beneath. Tarsi tawny beneath; fore coxæ red on the outer side; fore femora red above. Fore wings with a slight testaceous tinge towards the base and along the costa; veins white. Length of the body $5\frac{1}{2}$ lines; of the wings 17 lines.

a. Congo. Presented by Sir J. Richardson.

Genus 57. ANAXITA.

Mas. Proboscis corporis dimidio brevior. Palpi longi, porrecti, filiformes; articulus 2us 1o multo longior; 3us 2i dimidio longior. Antennæ mediocriter pectinatae, corpore paullo breviores. Abdomen alas posticas vix superans. Sexualia parva. Pedes longiusculi, fere nudi; tibiæ posticæ calcaribus quatuor sat parvis. Alæ longiusculæ.

Male. Proboscis less than half the length of the body. Palpi long, porrect, filiform; second joint very much longer than the first; third more than half the length of the second. Antennæ moderately pectinated, about three-fourths of the length of the body. Abdomen hardly extending beyond the hind wings; sexual appendages small. Legs rather long, almost bare; hind tibiæ with four rather small spurs. Wings rather long. Fore wings slightly convex in front; discal fold indistinct; first and second inferior veins connected at the base; third about four times further from the fourth than from the second. Hind wings with the costal vein commencing at the middle of the areolet; first and second inferior veins contiguous at the base; third about four times further from the fourth than from the second.

1. ANAXITA DECORATA.

Læte rufa; caput et thorax nigro alboque varia; palpi nigri; abdomen vitta dorsali interrupta nigra albido marginata, subtus fasciis nigris-albisque, apice fusco; pedes nigri, albo vittati; alæ anticæ ochraceæ, basi rufæ, albo ex parte marginatæ, macula costali rufa, fasciis duabus discalibus strigisque subapicalibus canis nigro marginatis; posticæ macula discali strigisque apicalibus nigris.

Bright red. Head with a black spot on the vertex, black behind with a white band. Proboscis ferruginous. Palpi black; white beneath, red above at the base. Antennæ black, red at the base. Prothorax and lappets white, the latter in front with black borders, which are streaked with white. Abdomen with a slender dorsal interrupted black whitish-bordered stripe; tip brown; under side with alternate black and white bands, the white bands very broad towards the base. Legs black, streaked with white. Wings ochraceous, red at the base; most of the fore border, and a small part of the hind border white; a red spot on the fore border beyond the middle; a basal mark, two discal bands, and a row of subapical streaks hoary, with black borders; first band nearly straight, not far from the base of the wing; second angular in the middle; streaks interlined with black. Hind wings with a black discal spot near the fore border, and a row of apical black streaks. Length of the body 9 lines; of the wings 30 lines.

a. Mexico. Presented by E. Doubleday, Esq.

b. Mexico. From M. Hartweg's collection.

Genus 58. ONYTHES.

Mas. Corpus longiusculum, sat robustum. Proboscis longa. Palpi longiusculi, validi, ascendentes; articulus 2us 1o valde longior; 3us parvus conicus. Antennæ subpectinatae, corpore paullo breviores. Abdomen alas posticas triente superans. Pedes sat validi, femora basi coxæque pilosa; tibiæ posticæ calcaribus quatuor mediocriter longis. Alæ longiusculæ, sat angustæ.

Male. Allied to the *Noctuities*. Body moderately stout, rather long. Proboscis long. Palpi stout, ascending, rather long; second joint very much longer than the first; third small, conical. Antennæ slightly pectinated, three-fourths of the length of the body. Abdomen extending for one-third of its length beyond the hind wings. Legs rather stout; femora towards the base and coxæ hairy; hind tibiæ with four moderately long spurs. Wings rather long and narrow. Fore wings with the first inferior vein nearly contiguous to the second at the base; third full twice further from the fourth than from the second.

1. ONYTHES PALLIDICOSTA.

Mas. *Fuscus*; caput et pectus *fulva*; palpi *nigro-fusci*; antennæ *nigræ*; thorax *fulvo univittatus*; abdomen *maculis lateralibus ventrequè luteis*; femora basi *subtus coxæque fulva*; tarsorum articuli *apice albid*i; alæ anticæ *apud costam fulvæ*.

Male. Brown. Head and pectus tawny. Proboscis ferruginous. Palpi blackish brown. Antennæ black. Thorax with a tawny dorsal stripe, and on each shoulder with a whitish tuft. Abdomen with a row of luteous spots on each side above; disk of the under side luteous. Femora towards the base beneath and coxæ tawny; tips of the joints of the tarsi whitish. Fore wings tawny along the costa, which is whitish; veins partly tawny. Hind wings grayish beneath. Length of the body 7 lines; of the wings 20 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 59. AMBRYLLIS.

Mas. Proboscis corporis dimidio multo brevior. Palpi ascendentes, breves; articulus 3us conicus, minimus. Antennæ mediocriter pectinatae, corporis dimidio longiores. Abdomen alas posticas superans. Forceps analis longus, gracilis. Pedes mediocriter longi; tibiæ posticæ calcaribus quatuor breviusculis. Alæ mediocriter latæ, subnudæ, sublimpidæ; anticæ maculatæ.

Glaucopis, p., *Van der Hæven*.

Male. Proboscis rather short, much less than half the length of the body. Palpi ascending, short; third joint conical, very small. Antennæ pectinated, more than half the length of the body; branches short. Thorax not crested. Abdomen extending beyond the hind wings. Sexual appendages with long and slender forceps. Legs of moderate length; fore tibiæ with an apical spur; hind tibiæ with four rather short spurs. Wings of moderate breadth, nearly bare and limpid. Fore wings with two superior veins; discal fold indistinct; second inferior vein as far from the first as from the third, which is full six times further from the fourth than from the second. Hind wings with two superior veins; costal (eighth, *Herr.-Schæff.*) springing from near the base of the subcostal; third inferior almost contiguous to the second at the base, about six times nearer to the first than the fourth.

1. AMBRYLLIS BOISDUVALII.

Mas. Nigra; thorax antice albo fasciatus; abdomen album, guttis posticis apiceque nigris; tarsi antici albo cincti; alæ sublimpidæ, anticæ costa nigra maculisque quatuor coccineis nigro marginatis.

Glaucopis Boisduvalii, *Van der Hæven, Tijdschrift*.

Head, proboscis, palpi and antennæ black. Thorax black, with a very broad white curved band in front. Abdomen white; apical half with a row of black dots; tip black, with a tuft of luteous hairs; under side with two lateral rows of black dots; appendages ferruginous. Legs black; fore tarsi with white bands. Wings nearly limpid; veins white. Fore wings with a black costa and with four crimson black-bordered spots; first in the discal areolet; second partly in the discal areolet, partly beyond; third by the internal angle; fourth at the tip. Length of the body 7—8 lines; of the wings 20—22 lines.

a. Venezuela. From Mr. Dyson's collection.

b. ———? From Mr. Milne's collection.

Genus 60. ANAPHELA.

Mas. Corpus gracile, sublineare. Caput et thorax dense fasciculata. Proboscis brevis. Palpi pilosi, breves; articulus 3us minimus. Antennæ serratæ. Abdomen lineare, alas posticas paullo superans, apice forcipatum. Pedes sat validi; tibiæ posticæ calcaribus mediocriter longis. Alæ anticæ latæ, subtrigonæ; posticæ anticis latiores.

Anaphela, Boisd.

Male. Body slender, nearly linear. Head and thorax thickly tufted with hairs. Proboscis short. Palpi hairy, short; third joint very small. Antennæ serrated. Abdomen linear, extending a little beyond the hind wings; tip forcipated. Fore wings broad, subtriangular, straight along the costa; outer border oblique and convex, forming a slight curve and not an angle with the hind border; first, second and third inferior veins approximate; fourth about twice further from the third than the third from the first. Hind wings broader than the fore wings and nearly two-thirds of their length. Legs moderately stout; fore tibiæ dentated beneath; hind tibiæ with four spurs of moderate length.

1. ANAPHELA LUCTIFERA.

Atra; caput, thoracis macula postica, abdominis vitta interrupta, alæque posticæ rufa; alæ anticæ maculis tribus (una basali duabusque discalibus) fasciæque e guttis subapicali flavo-albis; posticæ basi margineque postico nigris.

Anaphela luctifera, Boisd.

Deep black. Head red. Thorax with a red spot behind; pectus red in front. Abdomen red above, with the exception of the base and the fore border of each segment. Fore wings with yellowish white marks, which consist of a spot near the base, a larger one in the disk, and a third beyond still larger and contracted in the middle, and an undulating band of dots near the tip. Hind wings red, black at the base and along the hind border. Length of the body 7 lines; of the wings 18—20 lines.

a. ———? Presented by E. Doubleday, Esq.

b, c. Madagascar. From M. Becker's collection.

Genus 61. SCIATHOS.

Corpus sat robustum. Proboscis brevis. Palpi brevissimi; articulus 3us minimus. Pedes sat validi; tibiæ posticæ calcaribus apicalibus minutis. *Mas.*—Antennæ late pectinatæ. Abdomen alas posticas paullo superans. Alæ sat angustæ. *Fæm.*—Antennæ mediocriter pectinatæ. Abdomen alas posticas non superans. Alæ mediocriter latæ.

Body moderately stout. Proboscis short. Palpi very short; third joint very small. Legs rather stout; hind tibiæ with minute apical spurs. Fore wings with the first and second inferior veins unusually remote from each other; second twice further from the third than from the first; third a little further from the fourth than from the second. *Male.*—Antennæ rather deeply pectinated. Abdomen extending for about one-fourth of its length beyond the hind wings. Wings rather narrow. *Female.*—Antennæ moderately pectinated. Abdomen not extending beyond the hind wings. Wings moderately broad.

1. SCIATHOS PUNCTIGER.

Mas et fæm. *Albus; caput rufum; antennæ nigræ; thorax margine antico maculisque sex rufis; pectus et abdomen rufa; pedes nigri, coxis femoribusque rufis; alæ anticæ fascia maculari, ad costam rufæ; posticæ rufæ.*

Phalæna Bombyx punctigera, Cram. Pap. Exot. v. 151, pl. 34, f. 1.

Male and fem. White. Head bright red. Antennæ black. Thorax bright red in front, and with six dorsal bright red spots, three on each side. Pectus and abdomen bright red. Legs black;

coxæ and femora red. Fore wings with a red tinge, and with an oblique middle band of black dots; costa bright red, white behind. Hind wings bright red. Length of the body 5—7 lines; of the wings 14—22 lines.

a, b. Brazil. Presented by E. Doubleday, Esq.

c. ———?

Genus 62. OVIOS.

Corpus sat gracile. Proboscis capitis latitudine multo longior. Palpi pilosi, porrecti, longiusculi; articulus 2us 1o longior; 3us conicus, parvus. Abdomen alas posticas paullo superans. Pedes pilosi; tibiæ posticæ calcaribus quatuor longissimis. Alæ latæ. *Mas.*—Antennæ subpectinatae. *Fœm.*—Antennæ graciles, simplices.

Allied to *Erastria* and to other *Noctuities*.

Body rather slender. Proboscis much longer than the breadth of the head. Palpi hairy, porrect, rather long; second joint longer than the first; third conical, small. Abdomen extending a little beyond the hind wings. Legs hairy; hind tibiæ with four very long spurs. Wings broad. Fore wings with the second inferior vein as near to the third as to the first; third about four times further from the fourth than from the second. Hind wings with the costal vein springing from near the base of the wing. *Male.*—Antennæ slightly pectinated. *Female.*—Antennæ slender, simple.

1. OVIOS CAPENSIS.

Mas et fœm. *Alba, subtus lutea; caput nigro trifasciatum; palpi nigri, albo fasciati, subtus lutei; antennæ nigrae; thorax luteo quadrimaculatus, nigro bifasciatus; abdomen maculis dorsalibus nigris; pedes lutei, tarsi nigris albo fasciatis; alæ anticæ testaceæ, marginibus nigris albo conspersis albo et ex parte rufo limbatis, disco apicem versus viridescente, macula nigra discali albo marginata, maculis tribus subcostalibus unaque postica marginali rufis; posticæ testaceæ, macula arcuata discali fasciæque maculari submarginali nigris.*

Eudryas? *capensis, Herr.-Schæff. Lep. Exot. Sp. Ser. 1, f. 115, 116.*

Male and fem. Head and thorax white above, luteous beneath. Head with two black bands in front of the antennæ and one

behind. Proboscis tawny. Palpi black above, with a white band, luteous beneath. Antennæ black. Thorax with two luteous spots on each side, and with two black bands. Pectus with luteous hairs. Abdomen with a dorsal row of black spots. Legs luteous; tarsi black, with white bands; fore tibiæ with a thick tuft of white hairs. Fore wings testaceous; border mostly black, powdered with white, edged within with white, and about the tips without also with red; disk beyond the middle with a green tinge; a black discal white-bordered spot; three red subcostal spots, and one red posterior marginal spot; under side testaceous, with two black spots and a black band. Hind wings testaceous, with a lunar discal black spot, and a macular submarginal black band. Length of the body 8 lines; of the wings 18 lines.

a. South Africa. Presented by Dr. A. Smith.

b. Port Natal. From M. Gueinzus' collection.

2. OVIOS SYLVINA.

Mas. et fœm. *Cinerea; caput nigricans, luteo bimaculatum; palpi lutei, vitta nigra; antennæ nigræ; thorax luteo sex maculatus; abdominis segmenta luteo fasciata; pedes luteo fasciati; alæ anticæ argenteo-albidæ, fasciis tribus angulosis nigris maculaque discali nigro ex parte marginata rufa, apice, margine postico discoque ex parte fusco-cinereis; posticæ pallide fuscæ, fascia discali obscuriore.*

Phalæna Noctua Sylvina, Stoll. Suppl. Cram. Pap. Exot. 174, pl. 40, f. 4.

Male and fem. Gray. Head blackish, with a luteous spot on each side. Proboscis tawny. Palpi luteous, with a black stripe above. Antennæ black, testaceous at the base. Thorax with three luteous spots on each side. Abdomen with luteous bands on the hind borders of the segments. Legs with luteous bands. Fore wings silvery whitish, brownish gray at the tips, along the hind border, and on part of the disk, adorned with three zigzag black bands, and with a red lunate discal spot, which is partly bordered with black; cilia alternately luteous and gray; under side pale shining brown. Hind wings pale shining brown, with a brown discal band, which is much more apparent beneath, where the wings are whitish with brown borders; cilia white. *Female*.—Band of the hind wings not apparent above. Length of the body 6—8 lines; of the wings 18—20 lines.

Var. β. Male. Thorax white in front.

- a.* Caffraria. From M. Becker's collection.
b, c. South Africa. From Mr. Argent's collection.
d. Port Natal. From M. Gueinzus' collection.

Genus 63. EGYBOLIA.

Corpus sat validum. Proboscis longa. Palpi prominuli, porrecti, capitis latitudine multo longiores; articulus 2us 1o triplo longior; 3us gracilis, cylindricus, 2i dimidio æqualis. Thorax plumis latis vestitus. Abdomen alas posticas non superans. Pedes longiusculi, sat validi; tibiæ posticæ calcaribus quatuor longissimis. Alæ squamosæ, latissimæ. *Mas.*—Antennæ mediocriter pectinatae. *Fæm.*—Antennæ simplices.

Phalæna, p., *Stoll.*

Egybolia, *Boisd.*

Caloptera, *Blanchard.*

Allied to *Ophiusa*, a genus of *Noctuities*. Body moderately stout. Proboscis long. Palpi prominent, porrect, much longer than the breadth of the head; second joint thrice the length of the first; third slender, cylindrical, about half the length of the second. Thorax clothed with broad plumes. Abdomen extending as far as the hind wings. Legs rather long and stout; hind tibiæ with four very long spurs. Wings very broad, squamose. Fore wings with the second inferior vein as far from the first as from the third; third about four times further from the fourth than from the second. *Male.*—Antennæ moderately pectinated. *Female.*—Antennæ simple.

1. EGYBOLIA VAILLANTINA.

Cyaneo-viridis; caput, palpi, antennæ, tibiæ anticæ omnino et posteriores apice ochracea; alæ latæ, anticæ fasciis duabus nigris, fasciæque lata basali maculisque duabus anticis guttaque postica nonnunquam obsoleta ochraceis; alæ posticæ nigræ, apice margineque postico cyaneo-viridibus.

Phalæna Vaillantina, *Stoll. Suppl. Cram. Pap. Exot.* v. 142, pl. 31, f. 3.

Caloptera formosa, *Blanchard, Hist. Ins.* pl. 17, f. 6.

Egybolia Vaillantiana, *Boisd. Voy. de Delagorgue.*

———, *Angas, Kaffirs, Illustrated*, pl. 30, f. 19.

- a, b.* Port Natal. From Dr. Krauss' collection.
c, d. Port Natal. From M. Gueinzus' collection.
e. Zoolu Country. Presented by G. F. Angas, Esq.
f. South Africa. From M. Becker's collection.

Genus 64. APINA.

Corpus mediocriter robustum. Proboscis longiuscula. Palpi porrecti, pilosi, breviusculi; articulus 2us 1o multo longior; 3us lanceolatus, minutus. Abdomen alas posticas non superans. Pedes sat validi; tibiæ posticæ calcaribus quatuor longissimis. Alæ latæ. *Mas.*—Antennæ mediocriter pectinatæ. *Fœm.*—Antennæ simplices.

Body moderately stout. Proboscis rather long. Palpi porrect, hairy, rather short; second joint much longer than the first; third lanceolate, minute. Abdomen extending as far as the hind wings. Legs rather stout; hind tibiæ with four very long spurs. Wings broad. Fore wings with the first and second inferior veins near together at the base; third about six times further from the fourth than from the second. *Male.*—Antennæ moderately pectinated. *Female.*—Antennæ simple.

1. APINA CALLISTO.

Nigra; caput flavum; thorax flavo quadrivittatus; abdominis segmenta luteo vittata; pedes luteo hirti, tarsorum articulis apice albis; alæ nigro-fuscæ, marginibus anticis flavo guttatis; anticæ ferrugineo vittatæ, flavo conspersæ flavoque trifasciatæ; posticæ fascia lata arcuata discali flava.

Agarista? Callisto, *Doubleday MSS.*

Black. Head clothed with yellow hairs. Proboscis tawny. Antennæ white towards the tips. Thorax with four yellow stripes, the inner pair abbreviated. Abdomen with a luteous band on the hind border of each segment; these bands are paler beneath, especially in the male; tip luteous. Legs clothed with luteous hairs; tarsi with a white band on the tip of each joint. Wings blackish brown, with yellow dots along the borders. Fore wings with ferruginous stripes, sprinkled with yellow, and adorned with three yellow bands, the first indistinct, the second interrupted or abbreviated, the third broader and generally entire. Hind wings with a broad curved yellow discal band. Length of the body 7—9 lines; of the wings 22—24 lines.

a, b. Australia. Presented by J. G. Children, Esq.

c. Australia. Presented by the late Earl of Derby.

d. Australia.

e. Moreton Bay. From Capt. Parry's collection.

f. Van Dieman's Land. From Mr. A. J. Smith's collection.

2. APINA FEISTHAMELII.

Nigra ; palpi flavi, nigro fasciati ; thorax flavo vittatus ; abdomen ochraceo fasciatum ; femora ochraceo hirta ; tibiæ tarsique albo fasciata ; alæ anticæ flavo conspersæ et trifasciatae, apice flavo guttatae ; posticæ flavæ, nigro marginatae.

Agarista Feisthamelii, Boisd.

Black. Head and thorax of the male thickly clothed with black hairs. Head of the female partly clothed with pale yellow hairs. Palpi pale yellow, with a black band. Thorax of the male with two indistinct yellowish stripes, of the female with four pale yellow stripes, the middle pair very short. Abdomen with a tuft of orange hairs at the base, and with two orange bands near the tip, which is orange. Femora clothed with orange hairs ; tibiæ and tarsi with white bands. Fore wings sprinkled with pale yellow, with a row of pale yellow dots along the tips, and with three pale yellow bands in the disk ; first and second bands shortened hindward ; third curved inward towards the hind border ; the three bands sometimes connected together behind. Hind wings pale yellow, black towards the base, and with black borders. Length of the body 6—7 lines ; of the wings 16—20 lines.

a. Van Dieman's Land. Presented by R. Butler, Esq.

b—d. Presented by J. G. Children, Esq.

3. APINA ANGASII.

Nigro-fusca ; caput roseo bimaculatum ; palpi rosei, antennæ luteæ ; thorax roseo vittatus ; abdomen et pedes albo fasciata ; alæ anticæ albo conspersæ et maculatae et bifasciatae, maculis exterioribus roseis ; posticæ albo ciliatae.

—— *Angasii, Doubleday MSS.*

Blackish brown. Head with a rose-coloured spot on each side. Palpi rosy. Antennæ luteous. Thorax with some white plumes in front and on each side, and with an interrupted stripe of rosy plumes. Abdomen and legs with white bands. Fore wings powdered with white, and with three white spots in the disk ; a white band near the base, and another near the tip ; a row of rosy dots along the exterior border, and some white spots between them and the outer band. Hind wings fringed with white. Length of the body 6 lines ; of the wings 18 lines.

a, b. Australia. Presented by F. G. Angas, Esq.

Genus 65. ARE.

Mas. Corpus sublineare, subcylindricum, mediocriter longum et gracile. Proboscis corporis dimidio multo brevior. Palpi porrecti, pilosi, longiusculi; articulus 2us 1o multo longior; 3us longiconicus, 2i dimidio brevior. Antennæ sat late pectinatæ. Pedes breviusculi; tibiæ posticæ calcaribus duobus parvis apicalibus. Alæ latissimæ, non longæ; posticæ alas posticas vix superantes.

Male. Body rather slender. Proboscis about as long as the breadth of the head. Palpi porrect, rather long; second joint much longer than the first; third almost cylindrical, nearly half the length of the second. Antennæ moderately pectinated. Legs moderately stout; hind tibiæ with two rather small apical spurs. Wings very broad. Fore wings with the second inferior vein a little nearer to the first than to the third; third about four times further from the fourth than from the second.

1. ARE MARGINATA.

Alæ anticæ fusco-nigræ, margine antico baseos luteo; posticæ atræ basi macula discali, punctisque marginalibus, cærulescente-albis; abdomen apice luteum.

Phalæna (Bombyx) marginata, *Drury, Ins. Exot.* ii. 38, pl. 22, f. 2.
Drury, App. ii.

Callimorpha? marginata, *Westw. ed. Drury*, ii. 40, pl. 22, f. 2.

Dark brown. Palpi and antennæ black. Thorax with a luteous band in front. Abdomen luteous at the tip. Fore wings with a testaceous stripe along the basal half of the costa, and beyond the middle with a broad reddish band, which is forked in front. Hind wings with a whitish band near the base; a whitish spot in the fore part of the disk, and a row of whitish marginal dots.

a—c. Jamaica. From Mr. Children's collection.

d. ———?

2. ARE? MUMMIA.

Nigro-fusca; alæ anticæ linea submarginali guttisque subapicalibus obscurioribus, posticæ macula maxima basali oblonga cyanescente hyalina.

Phalæna Mummia, *Cram. Pap. Exot.* iii. 61, pl. 228, f. c.
Surinam.

Genus 66. AMMATHO.

Fem. Corpus sat breve. Proboscis corporis dimidio vix brevior. Palpi ascendentes, mediocriter longi; articulus 2us 1o multo longior; 3us conicus, minimus. Antennæ graciles, simplices, subseratæ. Abdomen alas posticas non superans. Pedes mediocriter longi et validi; tibiæ posticæ calcaribus quatuor parvis. Alæ mediocriter longæ latæque; anticæ costa convexa.

Allied to the *Lithosiidæ*. *Female*. Body rather short. Proboscis nearly half the length of the body. Palpi of moderate length, ascending; second joint much longer than the first; third conical, very minute. Antennæ slender, simple, minutely serrated. Abdomen not extending beyond the hind wings. Legs moderately long and stout; hind tibiæ with four small spurs. Wings moderately long and broad; fore border convex; anterior border very oblique; discal fold distinct along its whole length; second inferior vein a little nearer to the third than to the first; third full six times further from the fourth than from the second. Hind wings with the first, second and third inferior veins united at the base; fourth remote.

1. AMMATHO FIGURATUS.

Fœm. *Pallide rufus; thorax nigro bimaculatus; alæ anticæ costa fasciæque tribus nigris, 1a angulosa et ramosa, 2a recta, 3a arcuata radiosque emittente.*

Female. Pale red. Thorax with a small black spot on each side of the disk. Tibiæ with black tips. Fore wings with a black costa and a black cilia, and at one-third of the length with a zigzag black band, which emits two branches to the base; a black straight oblique band in the middle, connected at each end with a semicircular black band, which emits seven black radii towards the inner border; under side and hind wings pale red, blackish towards the tips. Length of the body 4 lines; of the wings 14 lines.

a. North China. From Mr. Cuming's collection.

2. AMMATHO CUNEONOTATUS.

Fœm. *Pallide rufus; caput nigro uniguttatum; thorax maculis cinereis flavo marginatis; alæ anticæ cinereæ maculis plurimis rufis flavo marginatis duabusque flavis rufo notatis; posticæ semihyalinæ.*

Female. Pale red. Head with a black dot on the vertex. Proboscis piceous. Thorax with gray yellow-bordered spots. Fore wings gray, with many mostly cuneiform red yellow-bordered spots, and with two large yellow red-marked spots, one on the disk, the other on the inner border. Hind wings semihyaline. Length of the body 5 lines; of the wings 15 lines.

a. Ceylon. Presented by R. Templeton, Esq.

3. AMMATHO LINEATUS.

Fœm. *Ochraceus; alæ anticæ fusco marginatæ bifasciatæ et apices versus univittatæ, posticæ luteæ fusco marginatæ.*

Fem. Orange. Proboscis and antennæ tawny, the latter orange towards the base. Thorax with a brown dot on each side by the fore wing. Fore wings bordered with brown; two brown bands, one before the middle and nearly straight, the other beyond the middle and much curved outward; a short brown stripe proceeding from the latter to the middle of the exterior border. Hind wings luteous, with broad brown borders. Length of the body $4\frac{1}{2}$ lines; of the wings 14 lines.

a. Sumatra. From Sir Stamford Raffles' collection.

Genus 67. SARAPUS.

Mas. Corpus robustum. Caput et thorax pilis longis densissime hirta. Proboscis brevissima. Palpi breves, pilosissimi; articulus 2us 10 multo longior; 3us minutus, conicus. Antennæ late pectinatæ. Abdomen alas posticas vix superans. Pedes validi; tibiæ posticæ calcaribus quatuor parvis. Alæ mediocriter latæ.

Male. Body stout. Head and thorax very thickly clothed with long hairs. Proboscis very short. Palpi short, very pilose; second joint much longer than the first; third minute, conical. Antennæ deeply pectinated, full half the length of the body. Abdomen hardly extending beyond the hind wings. Legs stout; hind tibiæ with four small spurs. Wings moderately broad. Fore wings with the first and second inferior veins nearly contiguous at the base; third more than twice further from the fourth than from the second.

1. SARAPUS BICOLOR.

Mas. *Cervinus*; antennæ albidæ, ramis fuscis; alæ anticæ costa testacea; posticæ albæ, apice testacæ.

Fawn-colour. Antennæ whitish, with brown branches. Costa of the fore wings testaceous. Hind wings white; their tips testaceous. Length of the body 7 lines; of the wings 16 lines.

a. Cape. From M. Dregé's collection.

b. ——— ?

Genus 68. PINARA.

Fœm. Corpus validum, dense pilosum. Proboscis brevissima. Palpi breves, valde pilosi; articulus 3us obtusus, minimus. Antennæ filiformes, thorace multo breviores, apice obtusæ, apices versus subtus subserratae. Abdomen alas posticas non superans. Pedes validi; femora et tibiæ late ciliata; tibiæ posticæ calcaribus duobus minutis apicalibus. Alæ longiusculæ, non latæ.

Female. Body stout, thickly clothed with hairs. Proboscis very short. Palpi short, very pilose; third joint obtuse, very small. Antennæ filiform, much shorter than the thorax, somewhat obtuse at the tips, minutely serrated beneath towards the tips. Abdomen not extending beyond the hind wings. Legs stout; femora and tibiæ with long hairs; hind tibiæ with two minute apical spines. Wings rather long, not broad. Fore wings with the second vein full four times further from the third than from the first; third about twice further from the fourth than from the second.

This genus has some resemblance to the *Liparidæ*, and the structure of its antennæ at once distinguishes it from all the other *Arctiidæ*.

1. PINARA CANA.

Fœm. *Cano-alba*; palpi et antennæ nigra; tarsi nigri, albocincti; alæ anticæ subcinereæ, fascia una obscuriore duabusque albidis, fasciæque perobliqua subundulosa e guttis nigris luteo extus marginatis.

Fem. Hoary white. Palpi and antennæ black. Tarsi black, with white bands. Fore wings grayish in front, with one darker gray and two whitish bands; the gray and the first whitish band before the middle, the second whitish band at two-thirds of the

length; a little beyond it there is a very oblique slightly undulating band of black dots, which have luteous borders on the fore side. Length of the body 6—9 lines; of the wings 18—30 lines.

a—d. Van Dieman's Land. Presented by Morton Allport, Esq.

e, f. Australia. Presented by H. G. Harrington, Esq.

g. Van Dieman's Land. Presented by — Walcott, Esq.

h—j. Van Dieman's Land. Presented by W. C. Hewitson, Esq.

k. Australia. Presented by the late Earl of Derby.

l. Van Dieman's Land. Presented by the Rev. Augustus Beaufort

ADDENDA.

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Genus TRICHOSOMA.

Trichosoma, *Ramb.*; *Duponch.*; *Blanch.*; *Lucas*.
Arctia, p., *Schr.*

1. TRICHOSOMA PARASITUM.

Arctia parasita, *Schr. Faun. Boic.* ii. 152.

Trichosoma parasitum, *Blanch. Hist. Nat. Ins.* iii. 487.

Trichosoma parasita, *Lucas, Ann. Soc. Ent. Fr. 3me Sér.* i. 403, 3.

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2. TRICHOSOMA CORSICUM.

Trichosoma corsicum, *Duponch. Hist. Nat. Lép. France, Suppl.* iii.
61, pl. 4, f. 6. *Lucas, Ann. Soc. Ent. Fr. 3me Sér.* i. 397, 1.

3. TRICHOSOMA BÆTICUM.

Trichosoma Bæticum, *Duponch. Hist. Nat. Lép. France, Suppl.* iii.
64, pl. 4, f. 7. *Ramb. Faune Ent. Andal.* ii. pl. 14, f. 1—4.
Lucas, Ann. Soc. Ent. Fr. 3me Sér. i. 400, 2.

4. TRICHOSOMA MAURITANICUM.

Trichosoma mauritanicum, *Lucas, Ann. Soc. Ent. Fr. 3me Sér.* .
414, 7.

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5. TRICHOSOMA ALGIRICUM.

Trichosoma algiricum, *Lucas, Ann. Soc. Ent. Fr. 3me Sér.* i.
415, 8.

9. TRICHOSOMA HEMIGENEUM.

Trichosoma hemigeneum, Lucas, *Ann. Soc. Ent. Fr.* 3me Sér. i. 405, 4.

Arctia hemigena, Cat. *Lep. Het.*

10. TRICHOSOMA PUDENS.

Mas. *Caput et thorax piloso rosacea; antennæ nigræ, supra rubescentes; abdomen rubescente pilosum, supra nigro maculatum; alæ cinereo-rosacæ; anticæ ad marginem nigro trimaculatæ, lineis duabus transversis nigris vix conspicuis; posticæ cinerascens, subdiaphanæ, venulis rosaceis, lunula centrali punctisque marginalibus nigris vix conspicuis.*

Trichosoma pudens, Lucas, *Ann. Soc. Ent. Fr.* 3me Sér. i. 410, 5, pl. 13, No. 2, f. 1.

Andalusia.

11. TRICHOSOMA ATLANTICUM.

Mas. *Caput et thorax cinereo-castaneo pilosa; antennæ nigricantes, supra flavescens tinctæ; abdomen nigrum, fulvo pilosum; alæ anticæ cinereo castaneæ, ad marginem transversim flavescens trimaculatæ, maculis angustis fusco circum cinctis, postice extusque flavescens lineatæ; posticæ flavæ late nigro limbatæ, limbo postice profundeque emarginato, lunula centrali lineisque duabus nigris.*

Trichosoma Atlanticum, Lucas, *Ann. Soc. Ent. Fr.* 3me Sér. i. 412, 6, pl. 13, No. 2, f. 2.

Algeria.

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Genus TAXILA.

Fæm. Caput, thorax et pectus longe pilosa. Proboscis brevis. Palpi hirti, ascendentes, capite breviores; articulus 3us minimus. Antennæ mediocriter pectinatæ. Abdomen alas perpaullo superans. Alæ anticæ subtrigonæ, hyalino notatæ; posticæ semihyalinæ, marginibus opacis.

Fem. Head, thorax and pectus thickly clothed with rather long hairs. Proboscis short. Palpi hairy, ascending, shorter than the head; third joint very small. Antennæ moderately pectinated. Abdomen extending very little beyond the hind wings; its hairs short and lying flat and smooth. Fore wings nearly triangular,

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straight along the costa, with semitransparent marks; outer borders very oblique, convex in the middle; hind angle rounded; first and second inferior veins almost close together at the base; fourth about eight times further from the fourth than from the second. Hind wings semitransparent, with opaque borders.

1. TAXILA CRUCIFERA.

Fusca; antennæ nigræ; thorax fascia antica arcuata flava; abdominis segmenta fasciis interruptis viridi-flavis; apex luteus; alæ anticæ rufo notatæ, vittaque discali fasciæque subapicali obliqua albis, semihyalinis; posticæ albæ, semihyalinæ, margine fusco rufonotato.

Chelonia crucifera, Perty, Del. Anim. Artic. Bras. 160, pl. 32, f. 4.

Brown. Antennæ black. Thorax with a curved pale yellow band in front. Abdomen with an interrupted pale greenish yellow band on each segment; tip luteous. Fore wings with a white semitransparent discal stripe, and with an oblique subapical band of the same colour; some red marks at the base, most apparent beneath, as is a curved red streak near the hind angle. Hind wings semi-transparent, with a bright red brown-bordered margin, which is accompanied by some white dots along its outer side. Length of the body 7 lines; of the wings 18 lines

a. Venezuela. From Mr. Dyson's collection.

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Genus ARCTIA.

43. ARCTIA? DIVISA.

Mas. Testacea; abdomen supra rufescens, e maculis nigris bivittatum; alæ anticæ rufo notatæ; posticæ rufæ, flavo notatæ.

Male. Testaceous. Palpi extending a little beyond the head; first joint very short; second very long; third very minute. Antennæ moderately pectinated. Abdomen extending a little beyond the hind wings; reddish above, with a row of black spots along each side. Hind tibiæ with four moderately long spurs. Wings rather broad. Fore wings with some red marks, which are most prevalent beneath. Hind wings red, with a few yellow marks; under side pale yellow, with a small red spot in the disk, and a larger one by the interior border. Length of the body 8 lines; of the wings 22 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

3 x 2

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Genus SPILOSOMA.

SPILOSOMA HÆMORRHOIDALIS.

Mas. *Roseo-alba* ; *caput et thorax antice coccinea aut lutea* ; *abdomen coccineum aut luteum, albo varium* ; *alæ anticæ ad costam luteæ, fascia obliqua guttulari nigra* ; *posticæ roseæ aut flavescentes*.

Male. White, with a very slight rosy tinge. Head and fore part of the thorax crimson. Antennæ black. Pectus and abdomen bright rose-colour, the latter white at the tip, and partly white beneath. Legs black, with rosy hairs ; posterior femora and tibiæ mostly clothed with white hairs. Fore wings luteous along the costa, and with an oblique band of black dots, which extends from half the length of the interior border to beyond two-thirds of the length of the costa ; under side rosy. Hind wings rosy, with yellowish borders. Length of the body 6—6½ lines ; of the wings 14—15 lines.

Var. β. Head and fore part of the thorax luteous. Abdomen luteous, mostly whitish beneath. Hind wings with a slight pale yellowish tinge.

Rio Janeiro. In Mr. Fry's collection.

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3. CYCNIA SORDIDA.

a, b. Europe. From M. Becker's collection.

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Genus ANTUEUA.

3. ANTUEUA VARIA.

Mas et fœm. *Læte flava* ; *caput antice luteum* ; *palpi, pectus et pedes nigra* ; *abdomen luteum, vittis duabus macularibus basi ventreeque nigricantibus* ; *alæ anticæ macula discali atomaria nigra, subtus posticæque nigricantes*.

Male. Antennæ pectinated ; the branches short.

Male and female. Bright yellow. Head luteous in front. Palpi, pectus and legs blackish. Antennæ tawny. Abdomen luteous, with a row of blackish spots along each side, blackish at the base and beneath. Fore wings with a spot of black flecks in the middle of the disk, blackish beneath. Hind wings blackish. Length of the body 8—9 lines ; of the wings 18—21 lines.

a. Port Natal. From M. Gueinzus' collection.

a d a d
 [7] [7]
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 a d a d
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4. ANTHEUA DISCALIS.

Mas et fœm. *Lutea ; caput disco albido ; abdomen e maculis nigris bivittatum, apice subtusque albidum ; alæ anticæ macula discali rufescente atomisque nonnullis nigris ; posticæ maris albidæ, fœminæ fuscescentes.*

Luteous. Head whitish on the disk. Abdomen whitish towards the tip and beneath, with a row of black spots on each side above and another beneath. Fore wings with some black flecks, and with an oblong dull pale reddish discal spot ; exterior border brownish. *Male*.—Thorax partly yellow. Fore wings with very few black flecks, whitish beneath. Hind wings whitish. *Female*.—Fore wings with the brown border much more distinct than in the male, brownish beneath. Hind wings brownish. Length of the body 6—8 lines ; of the wings 14—18 lines.

a—c. North India. From Mr. L. James' collection.

d. North India. Presented by W. W. Saunders, Esq.

e. East Indies. From Archdeacon Clerk's collection.

f. ———? From Mr. Milne's collection.

g, h. North India. From Mr. Stevens' collection.

5. ANTHEUA CINEREA.

Mas. *Pallide cinerea ; caput et thorax antice flava ; palpi flavi, supra nigricantes ; abdomen supra rufo-fulvum, vittis duabus macularibus, fasciisque tribus interruptis nigris ; alæ anticæ strigis nonnullis flavescens.*

Male. Pale grayish. Head and thorax in front yellow. Proboscis ferruginous. Palpi yellow, blackish above. Antennæ tawny. Abdomen reddish tawny on the disk above, with a row of black spots along each side, and with three interrupted black bands. Wings rather darker beneath than above. Fore wings with some indistinct pale yellowish streaks. Length of the body 9 lines ; of the wings 21 lines.

a. West Africa. Presented by E. Doubleday, Esq.

b. Sierra Leone. Presented by the Rev. D. F. Morgan.

6. ANTHEUA ANGUSTIPENNIS.

Mas. *Rufo-fulva ; abdomen pallide fulvum albido fasciatum ; alæ pallide cervinæ, anticæ angustæ strigis duabus atomosis nigris.*

Male. Reddish tawny. Antennæ whitish cinereous, with black branches. Dorsal disk of the abdomen pale tawny, with a whitish band on the hind border of each segment. Wings pale fawn-colour. Fore wings very narrow and with the angles much rounded; a character which distinguishes this from all the other species of the genus; two streaks of black flecks, one on the disk, the other near the interior border. Length of the body $7\frac{1}{2}$ lines; of the wings 18 lines.

a. Cape. From M. Dregé's collection.

Genus POLYMONA.

In the 'Synopsis' (page 586) this genus will come next to *Sciathos*, from which it may be thus distinguished:—

Tibiæ posticæ calcaribus apicalibus parvis.—SCIATHOS.

Tibiæ posticæ calcaribus apicalibus longis.—POLYMONA.

It is allied to *Antheua*, and seems also to have affinities with the *Liparidæ* and with the *Noctuities*.

Mas. Corpus sat robustum. Caput et thorax pilosissima. Proboscis brevissima. Palpi pilosissimi, mediocriter longi; articulus lusus brevis; 3us parvus, acuto-conicus. Antennæ latissime pectinatae, thorace paullo longiores. Abdomen alas posticas vix superans. Pedes validi; tibiæ posticæ calcaribus apicalibus longiusculis. Alæ mediocriter latæ.

Male. Body rather stout. Head and thorax very pilose. Proboscis very short. Palpi moderately long, very pilose; first joint short; third small, acute-conical. Antennæ very deeply pectinated, a little longer than the thorax. Abdomen hardly extending beyond the hind wings. Legs stout; femora and tibiæ with long hairs; hind tibiæ with rather long apical spurs. Wings moderately broad. Fore wings straight along the costa, somewhat rounded at the tips and on the interior angle, oblique along the exterior borders; second inferior vein a little nearer to the first than to the third; third more than thrice further from the fourth than from the second.

1. POLYMONA RUFIFEMUR.

Mas. Nigra; caput postice rufum; abdomen supra rufum, vittis tribus macularibus apiceque nigris; femora rufa; alæ anticæ apud venas rufo notatæ; posticæ albæ.

Male. Black. Head red behind. Abdomen red above, with three rows of black spots; tip black. Femora red. Fore wings

with a few red marks on the veins. Hind wings white, with a small blackish mark by the interior angle. Length of the body 7 lines; of the wings 18 lines.

a. Interior of South Africa. Presented by the late Earl of Derby.

Genus METARCTIA.

This genus and *Polymona* are distinguished by the same characters from *Sciathos*, and the structure of *Polymona* is very different from that of *Metarctia* :—

Abdomen alas posticas vix superans.—POLYMONA.

Abdomen alas posticas dimidio superans.—METARCTIA.

Corpus longum, subcylindricum. Proboscis brevissima. Palpi porrecti, subnudi, mediocriter longi, caput paullo superantes; articulus lvs brevis; 3us longiconicus, 2i dimidio brevior. Antennæ thorace paullo longiores. Abdomen alas posticas plus dimidio superans. Pedes validi, longiusculi; femora pilosa; tibiæ posticæ calcaribus apicalibus longis. Alæ angustæ, posticæ apud costam convexæ. *Mas.*—Antennæ mediocriter pectinatæ. *Fœm.*—Antennæ subpectinatæ.

Body long, nearly cylindrical. Proboscis very short. Palpi porrect, moderately long, almost bare, extending a little beyond the head; first joint short; third elongate-conical, not half the length of the second. Antennæ rather longer than the thorax. Abdomen extending for two-thirds of its length beyond the hind wings. Legs stout, rather long; femora pilose; tibiæ and tarsi bare; hind tibiæ with long apical spurs. Wings narrow. Fore wings straight along the costa, rounded at the tips, very oblique along the exterior border, which forms a continuous curve with the interior border; second inferior vein a little further from the third than from the first; third much further from the fourth than from the second. Hind wings convex in front. *Male.*—Antennæ moderately pectinated. *Female.*—Antennæ very minutely pectinated.

1. METARCTIA RUFESCENS.

Mas et fœm. *Ferruginea; caput, pectus, abdomen et femora rufescentia; tibiæ tarsique nigricantia; alæ anticæ macula discali nigricante, subtus rufescentes; posticæ pallide rufæ.*
Fœm.—*Abdomen nigro fasciatum, subtus nigro bivittatum.*

Ferruginous. Head, pectus, abdomen and femora reddish. Tibiæ and tarsi blackish. Fore wings with an indistinct blackish

discal spot; under side reddish. Hind wings pale red. *Female*.—Abdomen with black bands; under side with a black stripe on each side. Length of the body 7—9 lines; of the wings 16—18 lines.

Var. β. Fem. Fore wings red along the costa.

a, b. Caffraria. From M. Becker's collection.

c, d. Port Natal. From M. Gueinzus' collection.

Genus ROLEPA.

Corpus crassum.—ARCTIA.

Corpus gracile.—ROLEPA.

Mas. *Corpus gracile.* Proboscis brevissima. Palpi porrecti, mediocriter longi, caput paullo superantes; articulus 1us brevissimus; 2us longus; 3us minimus. Antennæ mediocriter pectinatæ, thorace multo longiores. Abdomen alas posticas non superans. Pedes sat graciles; tibiæ posticæ calcaribus quatuor longis. Alæ longiusculæ, mediocriter latæ; anticæ apice subangulatæ.

Apparently allied to the *Lithosiidæ*, and with some resemblance to the *Geometrites*. *Male*.—Body slender. Proboscis very short, not visible. Palpi porrect, moderately long, with short hairs, extending rather beyond the head; first joint very short; second long; third very minute. Antennæ moderately pectinated, very much longer than the thorax. Abdomen extending as far as the hind wings. Legs rather slender, with short hairs; hind tibiæ with four long spurs. Wings rather long, moderately broad. Fore wings almost straight along the costa, slightly angular at the tips, oblique along the exterior border; interior angle rounded; first and second inferior veins contiguous at the base; third very near the second; fourth very remote.

1. ROLEPA DELINEATA.

Mas. *Cervina; thorax postice, abdomen subtus et pedes testacea; alæ fascia lata marginali flava, fasciisque duabus angustis arcuatis obliquis, una rufescente, altera alba; anticæ fascia arcuata basim versus alba, maculisque duabus rufescentibus, una discali, altera apicali.*

Male. Fawn-colour. Antennæ whitish. Hind part of the thorax, under side of the abdomen and legs testaceous. Wings with two slender curved oblique bands (the one reddish, the other white), which extend from the costa at two-thirds and three-fourths of the length of the fore wings to two-thirds and three-fourths of the length of the interior border of the hind wings; a broad gilded

yellow band between the white band and the exterior border, fringe pale testaceous. Fore wings with the bands abruptly recurved towards the costa; a reddish discal mark, and a curved white band at a little before one-third of the length; a reddish spot at each tip. Length of the body 6—7 lines; of the wings 18—20 lines.

a. Rio Janeiro. From Mr. Stevens' collection.

b, c. Brazil. From M. Becker's collection.

Genus RENADA.

This genus may be thus distinguished from *Sciathos*, with which it agrees in the Synopsis, page 586:—

Alæ anticæ apud marginem anteriorem valde obliquæ.—*SCIATHOS*.

Alæ anticæ apud marginem anteriorem subobliquæ.—*RENADA*.

Fœm. Corpus robustum, dense pilosum. Proboscis brevissima. Palpi porrecti, pilosissimi, mediocriter longi, caput superantes; articulus 1us brevis; 2us longus; 3us 2o multo brevior. Antennæ subpectinatæ, thorace longiores. Abdomen alas posticas paullo superans, apice lanuginosum. Pedes validi, pilosi; tibiæ posticæ calcaribus parvis apicalibus. Alæ longiusculæ, mediocriter latæ.

Female. Body stout, thickly pilose. Proboscis very short or obsolete. Palpi porrect, moderately long, very pilose, extending rather beyond the head; first joint short; second long; third rather long, but much shorter than the second. Antennæ longer than the thorax, minutely pectinated; branches of equal length from the base to the tips of the antennæ. Abdomen extending a little beyond the hind wings, lanuginose at the tip. Legs stout, pilose; hind tibiæ with small apical spurs. Wings moderately broad, rather long. Fore wings very slightly convex along the costa and along the exterior border, which is oblique, rounded at the tips; second inferior vein a little nearer to the first than to the third; third full six times further from the fourth than from the second.

1. RENADA LATERALIS.

Fœm. *Fusca*; caput apud antennis flavum; thorax postice fulvus; abdomen vittis duabus fascisque fulvis; femora fulvo vittata; alæ anticæ fascia subapicali obscuriore, maculis duabus nigris, plaga postica basali fulva.

Female. Brown. Head yellow about the base of the antennæ, which are whitish testaceous. Thorax tawny towards the abdomen.

Abdomen tawny along the hind borders of the segments and at the tip beneath; a broad tawny stripe along each side. Femora with tawny stripes. Fore wings slightly tawny about the interior border towards the base, and with two black spots, one at the base, the other across the tip of the discal areolet; a dark brown subapical band almost parallel to the exterior border; hairs of the fringe blackish, whitish towards their tips. Hind wings a little darker than the fore wings. Length of the body 8—9 lines; of the wings 20—22 lines.

Rio Janeiro. In Mr. Fry's collection.

Genus PORELA.

Tibiæ subnudæ.—SCIATHOS.

Tibiæ dense pilosæ.—PORELA.

Corpus pilosum, valde robustum. Proboscis non conspicua. Palpi breves, porrecti, valde pilosi, caput paullo superantes; articulus 1us brevis; 3us acuto-conicus. Antennæ thorace vix longiores. Abdomen alas posticas non superans. Pedes validi, pilosi; tibiæ posticæ calcaribus apicalibus minimis. Alæ mediocriter latæ. *Mas.*—Antennæ sat late pectinatæ. *Fæm.*—Antennæ subpectinatæ.

Body pilose, very stout. Proboscis very short, not visible. Palpi short, porrect, very pilose, extending a little beyond the head; first joint short; third acute-conical. Antennæ hardly longer than the thorax. Abdomen extending as far as the hind wings. Legs stout, pilose; hind tibiæ with very minute apical spurs. Wings moderately broad. Fore wings straight along the costa till near the tips, where they are very slightly convex, hardly angular at the tips, oblique along the exterior border; interior angle obtuse and somewhat rounded; first and second inferior veins contiguous at the base; third much further from the fourth than from the second. *Male.*—Antennæ rather deeply pectinated. *Female.*—Antennæ minutely pectinated.

1. PORELA VETUSTA.

Nigra, albo varia; caput antice palpi et antennæ lutea; abdomen apice album; pedes lutei, nigro fasciati; alæ albo maculatæ, anticæ apud marginem anteriorem cinerascens.

Black. Head partly clothed with white hairs, luteous on each side and in front, and at the base of the antennæ. Palpi and antennæ luteous. Thorax whitish in front. Abdomen white at the tip. Legs luteous, with black bands; fore femora and fore tibiæ

with white hairs. Fore wings grayish along the exterior border, with white spots on the fringe, with a white discal dot, and with a white spot between the dot and the base of the interior border. Hind wings with whitish spots on the fringe. *Female*.—Thorax white on each side. Fore wings with the white spots much larger than in the male. Length of the body $4\frac{1}{2}$ —6 lines; of the wings 11—16 lines.

a, b. Sydney. Presented by E. Doubleday, Esq.

c. New South Wales. From Mr. Stevens' collection.

Genus MELORA.

Proboscis mediocriter longa.—GIPPIUS.

Proboscis brevissima.—MELORA.

Mas. Corpus pilosum, valde robustum. Proboscis brevissima. Palpi graciles, porrecti, pilosi, caput vix superantes; articulus Ius brevis; 3us minutus, conicus. Antennæ simplices, gracillimæ, thorace non longiores. Abdomen alas posticas paullo superans, apice fasciculatum. Pedes validi, pilosi. Alæ sat angustæ.

Male. Body very stout, pilose. Proboscis very short. Palpi slender, porrect, pilose, hardly extending beyond the head; first joint short; third minute, conical. Antennæ simple, very slender, not longer than the thorax. Abdomen extending for one-fourth of its length beyond the hind wings, tufted at the tip. Legs stout, pilose. Wings rather narrow. Fore wings opaque, straight along the costa, rounded at the tips, oblique and hardly convex along the exterior border; second inferior vein about thrice further from the third than from the first; third much further from the fourth than from the second.

1. MELORA AMYGDALOIDES.

Mas. *Lutea*; thorax fusco varius; pectus, abdomen basi rosea, coxæ; femoraque abdomen nigro quadrifasciatum, disco subtus nigro; alæ anticæ ferrugineo-fuscæ, maculis sex margineque exteriori luteis; posticæ nigricantes, semihyalinæ, marginibus rufescentibus.

Male. Luteous. Palpi yellow. Antennæ brown. Thorax clothed with brown hairs on the disk and on each side in front. Pectus and abdomen towards the base bright rose-colour. Abdomen with four slender black bands; disk of the under side black. Coxæ and femora rose-colour. Fore wings ferruginous-brown, luteous

along the exterior border, and with six large pale luteous spots. Hind wings blackish, semihyaline, with reddish borders. Length of the body 6 lines; of the wings 15 lines.

Rio Janeiro. In Mr. Fry's collection.

Genus ANDALA.

Tibiæ posticæ calcaribus minimis.—LACYDES.

Tibiæ posticæ calcaribus sat longis.—ANDALA.

Mas. Corpus gracile, lineare. Proboscis brevissima. Palpi porrecti, mediocriter longi, caput paullo superantes. Antennæ mediocriter pectinatæ. Abdomen alas posticas non superans. Pedes graciles; tibiæ posticæ calcaribus quatuor sat longis. Alæ angustæ.

Male. Body slender, linear. Proboscis very short, not so long as the breadth of the head. Palpi porrect, moderately long, extending rather beyond the head; first joint pilose, much longer than the second; third minute, acute-conical. Antennæ minutely pectinated, much longer than the thorax. Abdomen extending as far as the hind wings. Legs slender; hind tibiæ with four moderately long spurs. Wings narrow. Fore wings nearly straight along the costa, rounded at the tips, very oblique along the exterior border; interior angle obtuse and rounded; first, second and third inferior veins almost contiguous at the base; fourth remote.

1. ANDALA UNIFASCIA.

Mas. *Alba; caput antice fuscum; thorax e maculis fuscis univittatus; abdomen supra luteum, e maculis fuscis trivittatum; pedes fusco fasciati; alæ anticæ fascia unica maculisque nonnullis fuscis.*

Male. White. Head brown in front. Palpi and antennæ brown. Thorax with a band of four brown spots. Abdomen luteous above, except at the base, with three rows of brown spots. Legs with brown bands. Fore wings with an entire rather broad brown band before the middle, and with various brown spots, which form three or four imperfect brown bands. Hind wings with two brown spots near the costa, and with two more by the interior angle. Length of the body $5\frac{1}{2}$ lines; of the wings 14 lines.

East Indies. In Mr. Saunders' collection.

Genus NORAPE.

The hind tibiæ without spurs distinguish this genus from all in the Synopsis.

Mas. Corpus gracile. Proboscis obsoleta? Palpi graciles, brevissimi; articulus 1us brevissimus; 3us minimus. Antennæ sat late pectinatae, corporis dimidio longiores. Abdomen alas posticas non superans. Pedes gracillimi, longiusculi; tibiæ posticæ calcariibus nullis. Alæ mediocriter latae.

Male. Body slender. Proboscis obsolete? Palpi slender, very short, not extending near so far as the head; first joint very short; third very minute. Antennæ rather deeply pectinated, about two-thirds of the length of the body. Abdomen extending as far as the hind wings. Legs very slender, rather long; hind tibiæ with no spurs. Wings moderately broad. Fore wings very slightly convex in front, rounded at the tips, oblique and slightly convex along the exterior border; second inferior vein a little nearer to the first than to the third; third more than twice further from the fourth than from the second.

1. NORAPE PUELLA.

Mas. *Candida; caput pallide flavum, subtus nigrum; palpi toti, femora tibiæque extus nigra; abdomen luteo fasciatum; alæ argenteæ, anticæ vittis interruptis nigris.*

Male. Pure white. Head pale yellow, black beneath. Palpi black. Antennæ with luteous branches. Femora and tibiæ black on the outer side. Abdomen with luteous bands on the hind borders of the segments. Wings silvery white. Fore wings with slender interrupted black stripes, which are most complete in front of the discal areolet. Length of the body 4—4½ lines; of the wings 10—11 lines.

Rio Janeiro. In Mr. Fry's collection.

Walker, Francis

List of the specimens of Lepidopterous Insects in the Collection of the
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